

SIMPLIFY, NOTIFY, MODIFY

Using Behavioral Insights to Increase Incarcerated Parents' Requests for Child Support Modifications

OPRE Report 2016 43
October 2016

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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 a behavioral intervention, developed in collaboration with the Washington State Division of Child Support (DCS), to increase the number of incarcerated noncustodial parents in Washington who apply for modifications to reduce the amount of their child support orders. Incarcerated noncustodial parents have a limited ability to pay their child support orders each month, due to their incarceration, which can lead to the accumulation of significant child support debt.

The BIAS project diagnosed bottlenecks in the process for applying for modifications, hypothesized behavioral reasons for the bottlenecks, and designed a sequence of behaviorally informed materials to be sent to incarcerated noncustodial parents. These materials provided incarcerated parents with a series of supports at different points in time to make them aware that they may be eligible for an order modification and to move them from intention to action. The materials included all the paperwork needed to request a modification, a tip sheet providing clear and succinct guidance on how to fill out the modification request, and reminders through electronic messages.

The test focused on 827 noncustodial parents who were incarcerated in Washington State prisons and were randomly assigned to one of two groups — the BIAS group or a control group. The BIAS group received the intervention materials, and the control group experienced DCS's typical approach to interaction with incarcerated parents, which consisted of ad hoc outreach and written materials sent to parents who requested them. The intervention increased the percentage of parents requesting a modification from 9 to 41 percent, a 32 percentage point increase. Additionally, the intervention resulted in a 16 percentage point increase in the number of incarcerated parents actually receiving a modification to their child support orders.

The statistically significant impact on requests for modifications echoes the results of a prior BIAS test in Texas, which also found impacts on modification requests. Furthermore, it builds on these results by demonstrating that behaviorally informed messaging can also increase the percentage of parents who actually receive modifications to their child support orders. Finally, the intervention demonstrates the possible value of electronic messages as a tool for government agencies seeking to communicate with incarcerated populations.

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The Authors

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 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.

This report presents findings from a behavioral intervention, developed in collaboration with the Washington State Division of Child Support (DCS), to increase the number of incarcerated noncustodial parents in Washington who apply for modifications to reduce the amount of their child support orders.¹ This request is the first step in obtaining an order modification.

This study builds on previous BIAS work in Texas that also sought to increase the percentage of incarcerated noncustodial parents seeking order modifications. Findings from the Texas study indicated that behaviorally informed outreach and more targeted messaging can increase requests for modifications.² The Washington study expands on this work. It was conducted in a different policy environment than the one in Texas and in a context where there have not been systematic efforts to increase modifications among incarcerated noncustodial parents. As with the work in Texas, this study evaluates whether a behaviorally informed set of communications and process changes can improve the modification request process. Additionally, the Washington study builds on the work in Texas by examining the number of incarcerated parents who receive modifications to their support orders.

Order Modification Policy and Process in Washington

DCS's interpretation of Washington statute is that incarceration renders individuals unemployable, and therefore qualifies incarcerated parents for a review of their child support order amount.³ Given the limited ability to pay that is associated with incarceration, maintaining the same child support orders can lead to accumulation of substantial arrearages.

Noncustodial parents' child support orders are not automatically modified upon incarceration in Washington. The onus is on the incarcerated parent to request a modification. DCS did not have a systematic method for informing incarcerated noncustodial parents that they may be eligible for a modification. Thus, parents might not know that they were eligible if they did not receive timely and clear information about modifications.

1 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 children.

2 Mary Farrell, Caitlin Anzelone, Dan Cullinan, and Jessica Wille, *Taking the First Step: Using Behavioral Economics to Help Incarcerated Parents Apply for Child Support Order Modifications*, OPRE Report 2014-37 (Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2014).

3 Revised Code of Washington 26.09.170.

Incarcerated parents often have substantial current support obligations. DCS data showed that the average monthly order amount among this population was over \$200. Moreover, these parents frequently have thousands of dollars in existing child support debt. Before the BIAS study, a review of DCS data showed that 5 percent of eligible incarcerated parents had requested a modification following their most recent incarceration date.⁴

Behavioral Intervention

The intervention, which the research team identified through a process of behavioral diagnosis and design, involved implementing a behaviorally informed communications strategy that specifically addressed critical bottlenecks identified in Washington's current modification request process. The intervention materials sought to encourage incarcerated noncustodial parents to complete and mail the request forms for a child support order review. The team hypothesized that a series of mailed intervention materials would increase the number of parents requesting and receiving order modifications.

The communications strategy that the team implemented for the study involved several phases. In order to address noncustodial parents' limited awareness of the ability to request a modification, it began with simple, electronic messages notifying them of the opportunity for a modification and a forthcoming modification packet in the mail. Shortly after sending the electronic message, DCS staff mailed a follow-up reminder letter notifying parents to check their electronic message account so they would see the message. Following the reminder letter, DCS automatically mailed modification packets to noncustodial parents, avoiding the need for parents to request a packet. DCS also prepopulated the application with any available information, such as name, address, and case number. The modification packet included a one-page tip sheet aimed at addressing the cognitive load (or overburdened mental resources) associated with completing the packet. The tip sheet gave suggestions in simple language for how to fill out forms. It was tailored to incarcerated parents, including suggestions for how to address questions on the forms that might not have a straightforward answer. The modification packet also included a postage-paid, pre-addressed envelope to use to return the forms. Finally, DCS sent follow-up electronic messages to parents reminding them to submit the forms.

Findings

The test focused on 827 noncustodial parents who were incarcerated in Washington prisons and randomly assigned them to one of two groups — the BIAS (program) group or a control group. The BIAS group received the intervention materials, and the control group experienced DCS's typical approach to interaction with incarcerated parents, which consisted of ad hoc outreach and written materials sent to parents who requested them.

The randomization occurred between February and May 2015. The research team used administrative data to track outcomes for three months following random assignment.⁵ For example, participants randomly assigned in February were followed through the end of April.

This behavioral intervention demonstrates the potential to increase requests for order modifications among incarcerated parents. The use of a coordinated messaging strategy mapped to critical behavioral bottlenecks resulted in positive increases in requests for modifications, the percentage of requests that contained the necessary information to pass the initial stage of the process, and the total number of modifications granted.

Table ES.1 shows key outcomes from the test. The intervention increased the percentage of parents requesting modifications by 32 percentage points, from 9 percent for the control group to 41 percent for the BIAS group, a difference that is statistically significant.

⁴ This number is based on a September 2014 analysis.

⁵ In addition, the research team collected outcome data for six months post-random assignment for the first cohort.

TABLE ES.1
APPLICATION AND MODIFICATION OUTCOMES,
THREE-MONTH FOLLOW-UP
WASHINGTON STATE DIVISION OF CHILD SUPPORT

OUTCOME	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	STANDARD ERROR
Application submitted (%)	41.3	9.4	31.9***	2.9
Application forwarded to prosecutor or claims officer team (%)	33.9	7.8	26.1***	2.7
Modification granted (%)	18.3	2.3	16.0***	2.1
Sample size	411	416		

SOURCE: MDRC calculations using Washington State Division of Child Support 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 parents' baseline corrections system facility and monthly child support obligation to increase precision.

Rounding may cause slight discrepancies in differences.

There was also a large, statistically significant impact on the number of applications that caseworkers deemed complete and forwarded to the next stage of the modification process. Eight percent of the control group completed an application and had it processed, compared with 34 percent of the BIAS group who completed an application and had it processed. This difference represents a 26 percentage point impact on forwarded applications — over a fourfold increase.

The large, significant impacts on those two most proximal outcomes translated into an impact on a more distal outcome: successful modification of an order. Two percent of the control group had a modification granted during the three months of outcome tracking, but 18 percent of the BIAS group did, resulting in a statistically significant 16 percentage point impact on modifications granted.

The findings from this test suggest that factors such as parents' lack of awareness of the process for requesting a modification, the multiple steps associated with requesting an order modification, and the complexity of these steps may be substantial barriers to incarcerated parents requesting order modifications. Moreover, the findings suggest that a behaviorally informed approach may substantially increase the number of parents requesting modifications.

Behavioral economics provides a new way of thinking about the design of human service programs and a potentially powerful set of tools for improving program outcomes. The BIAS project offers the opportunity for continued hypothesis-testing grounded in behavioral economics and takes advantage of low-cost experimentation, which can include iterative, rapid-cycle tests. In addition to this and previous research (see the list of previously published research at the back of this report), the BIAS project is publishing a final synthesis report in early 2017.

Two additional projects are building on the BIAS project. ACF's Office of Planning, Research, and Evaluation is sponsoring the BIAS Next Generation project, which will expand the use of behavioral science to a wider range of ACF programs, go beyond testing simple “nudges,” include more implementation research, and develop tools to help program administrators and operators apply lessons from behavioral science to their work. Results from the BIAS Next Generation evaluations will be published as they become available to further inform this rapidly developing field. Additionally, in 2014, the Office of Child Support Enforcement launched a major initiative called Behavioral Interventions for Child Support Services (BICS). In the ongoing BICS demonstration project, MDRC and its partners are working with eight child support agencies to build on the early lessons from the BIAS project and apply insights from behavioral science to engage parents positively and improve program performance.

SIMPLIFY, NOTIFY, MODIFY

Using Behavioral Insights to Increase Incarcerated Parents' Requests for Child Support Modifications

Introduction

The Behavioral Interventions to Advance Self-Sufficiency (BIAS) project, 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, is the first major opportunity to apply behavioral science to programs that serve poor and vulnerable families in the United States. The project, led by MDRC, aims to apply behavioral insights to issues related to the operations, implementation, and efficacy of selected programs and policies. The goal is to learn how tools from behavioral science can be used to deliver programs more effectively and, ultimately, to improve the well-being of low-income children, adults, and families. For additional background about behavioral economics, see Box 1.

This report presents findings from a behavioral intervention, developed in collaboration with the Washington State Division of Child Support (DCS). The study focused on incarcerated noncustodial parents in Washington who owed current child support.¹ DCS sought to increase the number of incarcerated noncustodial parents who requested a decrease in the amount of child support they were required to pay while incarcerated. This request is the first step in obtaining an order modification.

This study reflects the child support community's interest in setting orders based on noncustodial parents' actual circumstances and ability to pay. In particular, DCS believes that order amounts that better reflect incarcerated parents' ability to pay can help reduce the chance that parents leave prison with substantial child support debt.

Not modifying support orders upon incarceration can lead incarcerated parents to accumulate high arrears. One study projected that the average incarcerated noncustodial parent in the United States would leave prison with an additional \$20,000 in unpaid child support, which poses a serious barrier to reentry into society and regular employment after release.² Overwhelmed by the large debt, the noncustodial parent may abandon any attempt to make payments or may enter the underground economy, possibly harming the custodial parent's chances of receiving funds.³ High arrears may lead to an increased risk of recidivism, rearrests, and incarceration.

In addition to the potential benefits for parents and children, reduced current support obligations among a population with a low likelihood of payment can help improve a state's performance on the

1 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 children.

2 Thoennes (2002).

3 Waller and Plotnick (2001).

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, both programs and participants 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, that planning and commitment devices can be used to improve self-control, and that default rules can produce positive outcomes even for people who fail to act. Over the past decade, behavioral economics has gained popularity in a variety of fields. For example, in one study, researchers found that providing college students with a personalized message to go along with each assignment explaining how the assignment would affect their final grade had a positive effect on students' assignment scores.[†] In the field of philanthropy, a study by the United Kingdom's Behavioural Insights Team showed that sending employees of the British revenue and customs service an electronic invitation to donate to charity, including a picture of a colleague that currently gave to charity, more than doubled the percentage of people signing up to follow suit.[‡] Finally, the BIAS team previously partnered with the Indiana Office of Early Childhood and Out-of-School Learning. In a series of tests in Indiana, BIAS researchers designed behavioral interventions and found that they increased the percentage of parents who attended their renewal appointment by up to 10.6 percentage points, those who renewed on time by up to 2.7 percentage points, and those who selected a high quality-rated child care provider by 2.1 percentage points.[§]

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).

[†]Smith and White (2016).

[‡]UK Behavioural Insights Team (2013).

[§]Dechausay and Anzelone (2016).

^{||}Singal (2013).

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

federal performance measure of collections on current support, which can result in increased federal incentive payments for the state.⁴

This study builds on previous BIAS work in Texas that also sought to increase the percentage of incarcerated noncustodial parents seeking order modifications. Findings from the Texas study indicated that behaviorally informed outreach and more targeted messaging can increase requests for modifications.⁵ For more information, see Box 2.

The Washington study expands on the work in Texas. It was conducted in a different policy environment than the one in Texas and in a context where there have not been previous systematic efforts to increase modifications among incarcerated noncustodial parents. As with the work in Texas, this study evaluates whether a behaviorally informed set of communications and process changes can improve the

4 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.

5 Farrell, Anzelone, Cullinan, and Wille (2014).

BOX 2

TAKING THE FIRST STEP: LESSONS FROM THE TEXAS BIAS PILOT

In 2013, the Texas Office of the Attorney General's Child Support Division operated a program that contacted incarcerated noncustodial parents via mail, informed them of the option to apply for order modifications, and provided instructions on how to begin the process. From the initial effort, less than one-third of contacted parents responded to the outreach. The BIAS project implemented behaviorally informed changes to the mailing sent to incarcerated noncustodial parents. Specifically, the team:

- Revised the cover letter to make it more readable
- Printed the letter on blue paper so that it would stand out
- Pre-populated a section of the application
- Sent a postcard before the application materials were sent letting noncustodial parents know they would receive it in the next few weeks
- Sent another postcard reminder following the application packet to those who had not responded

To test the behaviorally informed changes, a control group received the standard materials that were sent to incarcerated noncustodial parents (including a letter, instructions on how to apply, and an application), while the BIAS group received the materials described above.

The revised outreach increased the application response rate to 39 percent, an 11 percentage point increase over the control group's response rate of roughly 28 percent.

modification request process. Additionally, the Washington study builds on the work in Texas by examining the number of incarcerated parents who receive modifications to their support orders.

Order Modification Policy and Process in Washington State

DCS's interpretation of Washington statute is that incarceration renders an individual unemployable, therefore qualifying incarcerated parents for a review of their child support order amount.⁶ Court decisions have reaffirmed this interpretation as well.⁷ Given the limited ability to pay that is associated with incarceration, maintaining the same child support orders can lead to the accumulation of substantial arrearages.

Noncustodial parents' child support orders are not automatically modified upon incarceration in Washington. The onus is on the incarcerated parents to request a modification. DCS did not have a systematic method for informing incarcerated noncustodial parents that they may be eligible for a modification. Thus, parents might not know that they were eligible if they did not receive timely and clear information about modifications.

Conversations with DCS leadership and caseworkers indicated that DCS staff occasionally visit prisons to provide parents with information about child support. However, these visits are not consistent, staff do not go to all facilities, and they only reach a small subset of the inmate population. Additionally, the electronic systems DCS uses to track case status do not automatically alert workers when a parent on their caseload has been incarcerated. As such, if caseworkers want to proactively notify an incarcerated parent about his or her ability to request a modification, they must first manually review the case to know that the parent is incarcerated. Individual caseworkers have discretion as to whether or not they communicate to incarcerated parents that they may be eligible for a modification to their child support order. Conversations with DCS staff indicated that, while some DCS staff members are proactive, it is not common that caseworkers reach out to incarcerated parents to ask them if they wish to seek a modification.

⁶ Revised Code of Washington 26.09.170.

⁷ *In re Marriage of Blickenstaff*, 859 P.2d 646 (Wash. 1993).

Newly incarcerated individuals may also learn about the potential to receive a child support modification as part of orientation at Washington's prison intake facility. The orientation covers a wide array of topics, and a prisoner group often gives a short presentation on child support. However, the length and content of these presentations vary, and they often focus more heavily on debt forgiveness as opposed to the required steps to receive a modification.

Modification Process

In Washington, orders are established through either an administrative or a judicial (court-ordered) process. These two types of orders require different paperwork and processes for modification.

- The administrative order modification process can be completed in as little as two months, though the timing depends on whether or not a settlement can be reached between the custodial parent and noncustodial parent, or if a hearing with an administrative law judge is necessary.
- Modifications of judicial orders require a court hearing, which introduces variation based on the discretion of individual prosecutors and judges. The judicial process is lengthy and requires sustained engagement on the part of the noncustodial parent at multiple stages.⁸

Figure 1 outlines the order modification process for incarcerated parents in Washington. After an order is established, parents can request a modification if they have a substantial change in circumstances, such as incarceration. Parents who want a modification must request an application packet from DCS. The parent's caseworker then mails the parent a modification package, which must be completed and returned to the caseworker. The caseworker then reviews the packet to make sure it meets the minimum requirements.⁹

The required forms differ depending on whether an order was established through the judicial or the administrative process. In both cases, parents are required to fill out multiple forms.

- Parents who want to request a modification to an administrative order receive a "Petition for Modification" and the "Washington State Child Support Schedule," a 19-page pamphlet that includes a set of worksheets documenting income, current support obligations, child-rearing expenses (for example, health care and day care), and other factors that may influence setting the order amount.¹⁰
- Parents who want to request a modification to a judicial order receive a "Child Support Order Review Request," the 19-page "Washington State Child Support Schedule," a "Financial Declaration," and a "Confidential Information" form.¹¹

The review process that an individual's submitted packet undergoes depends on whether the case was initially established through the judicial or administrative process.

For judicial cases, caseworkers send requests to the county prosecuting attorney for a hearing. If the prosecutor deems the request worthy of review, the custodial and noncustodial parents must participate in a hearing (either in person or by phone). The parties have the opportunity to come to a mutually agreeable decision, though the superior court judge has the discretion to make a final determination.

For administrative cases, caseworkers send completed applications to the claims officer team, a group of DCS attorneys. This team attempts to come to a settlement between the parents. If the parents come to a verbal agreement, DCS mails each party an agreement to sign. In the event that no agreement

8 In Washington, modifications to judicially established support orders take an average of 143 days, whereas modifications to administrative orders take an average of 60 days.

9 These requirements vary somewhat based on whether it is an administrative or a judicial case. However, they generally focus on whether the parent signed the required fields and provided the necessary information to make his or her case.

10 Washington State Department of Social and Health Services (2013c); Washington State Courts (2015).

11 Washington State Department of Social and Health Services (2013a); Washington State Supreme Court (2006); Washington State Department of Social and Health Services (2013b).

FIGURE 1
THE ORDER MODIFICATION PROCESS IN WASHINGTON
WASHINGTON STATE DIVISION OF CHILD SUPPORT

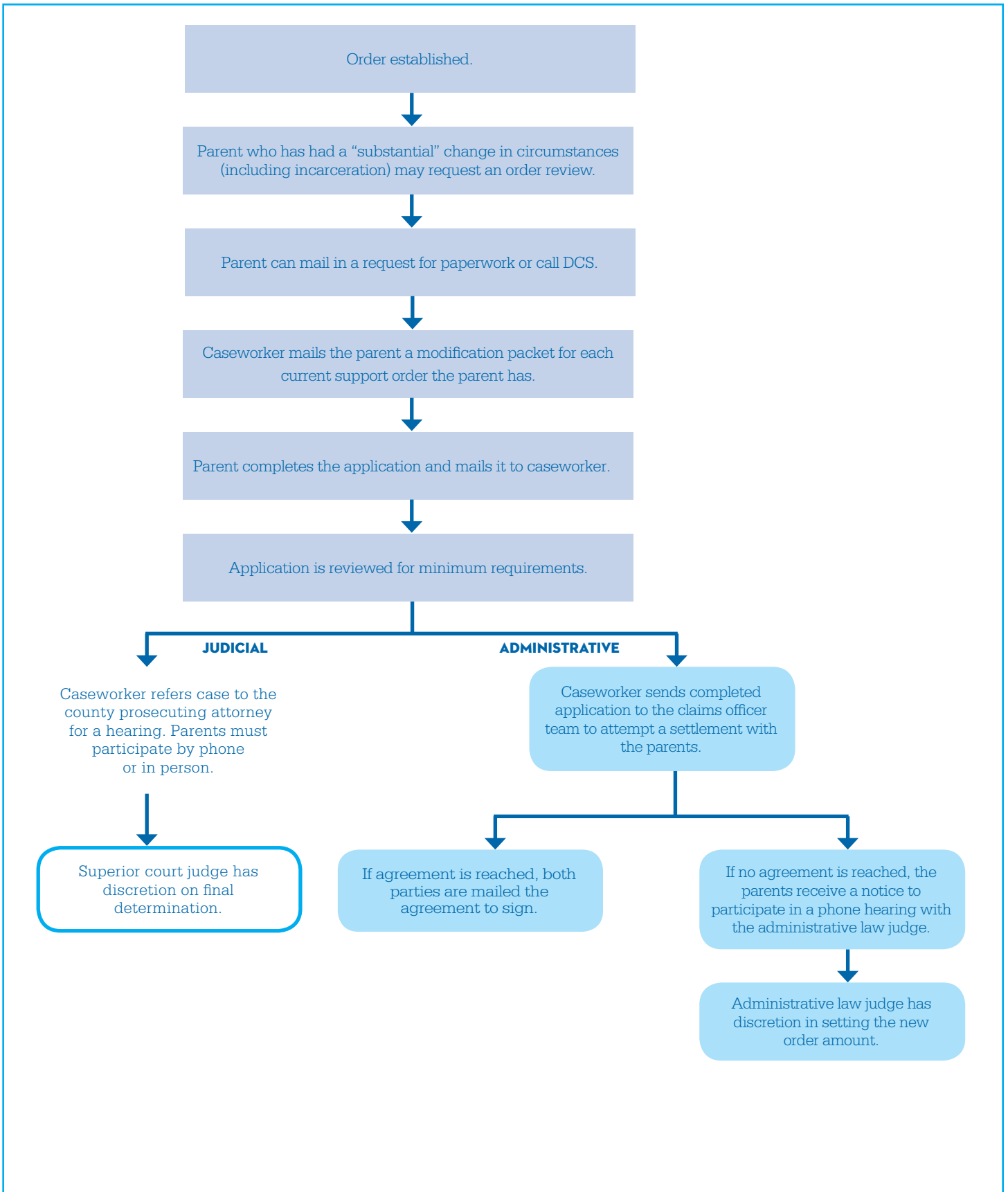
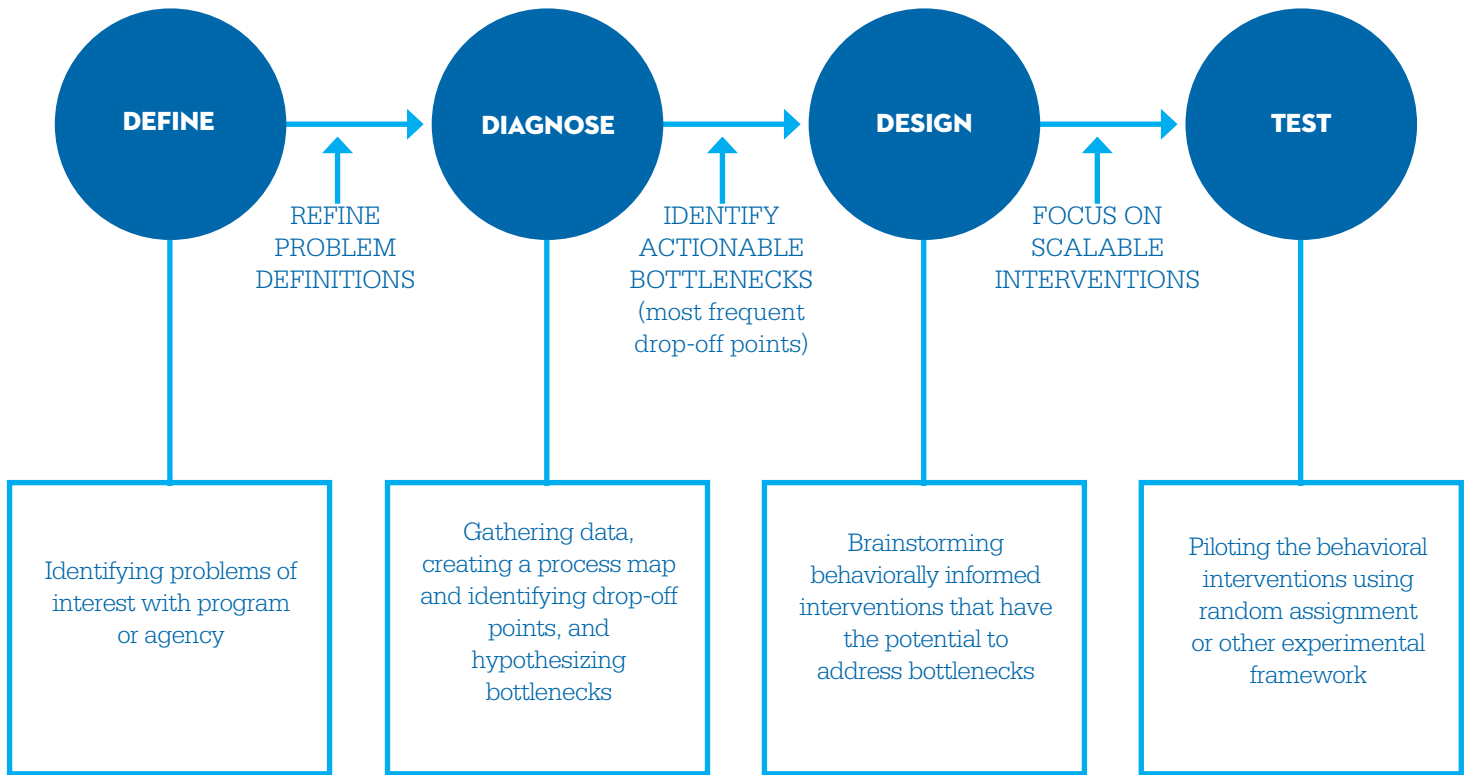


FIGURE 2
THE BEHAVIORAL DIAGNOSIS AND DESIGN PROCESS
 WASHINGTON STATE DIVISION OF CHILD SUPPORT



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).

is reached, the two parties participate in a phone hearing with an administrative law judge, who has discretion in setting the new order amount.

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 insights from behavioral science.¹² As depicted in Figure 2, the behavioral diagnosis and design process includes four phases. Rather than being linear, as the figure suggests, the actual process is iterative in the ideal case, allowing for multiple rounds of hypothesis-testing and refinement.

In the first phase of the process, the problem is defined in a neutral, measurable way. The BIAS team relies on a variety of data when defining the problem, in order 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 may be causing the problem. The team uses the data to guide hypotheses about the behavioral reasons for participant outcomes.

During the third or design phase, the BIAS team uses theories about why bottlenecks, or barriers to program success, are occurring in order to generate intervention ideas based on behavioral research. It is important to have a clear theory of change to avoid creating behavioral interventions arbitrarily based

¹² 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.

on what has worked in other contexts. Interventions are designed to address issues without adding significantly to the cost of a program, which means making relatively simple, inexpensive changes. This phase is followed by the test phase, during which behavioral interventions are evaluated using rigorous scientific methods — ideally, randomized controlled trials.¹³ In March 2014, the BIAS team initiated this process with DCS.

Defining the Problem: Increasing Incarcerated Noncustodial Parents Who Submit Order Modification Requests

Incarcerated parents often have substantial current support obligations. An analysis of DCS data from September 2014 showed that the average monthly order amount among this population was over \$200. Moreover, these parents had substantial existing child support debts, an average of \$9,019 on administrative orders and \$16,196 on judicial orders.¹⁴

Before the BIAS study, few eligible incarcerated noncustodial parents submitted the packet to request an order modification review. A review of DCS data from September 2014 showed that only 5 percent of eligible incarcerated parents had requested a modification following their most recent incarceration date.

Efforts by DCS to collect child support from incarcerated noncustodial parents have not resulted in dramatic increases in the number of incarcerated parents applying for order modifications. For example, in April 2012, DCS conducted a mass inmate account garnishment. This effort was in addition to the regular monthly deductions that DCS makes from inmate accounts, and it targeted the accounts of incarcerated parents owing payments.¹⁵ The garnishment affected 1,074 parents who owed current child support. Despite the fact that this garnishment had a large, unexpected effect on inmates' funds, it spurred a relatively small number of parents to request a modification, which could potentially prevent future garnishments. Following this action, only 79 modification requests were submitted in subsequent weeks.¹⁶ This outcome likely reflects incarcerated parents' limited awareness of the modification process or their perception that it is difficult to request a modification successfully, perhaps due in part to limited efforts by DCS to make incarcerated parents aware of the modification process.

Diagnosis

Given these low rates of requests for modifications among incarcerated parents, the BIAS team undertook a behavioral diagnosis focusing on the relevant bottlenecks and associated hypothesized psychologies that may have been contributing to these low rates.

The diagnosis work included analysis of administrative data, site visits to two state correctional facilities, interviews with DCS and Washington Department of Corrections staff, and a focus group with formerly incarcerated noncustodial parents.

Figure 3 presents a behavioral map that links hypothesized bottlenecks to critical phases of the order modification process. Behavioral terms used throughout this report are in bold type the first time they appear and are defined in Appendix Table A.1.

13 The BIAS project 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 to be the most rigorous form of evaluation and the most accurate way to detect the impact of an intervention.

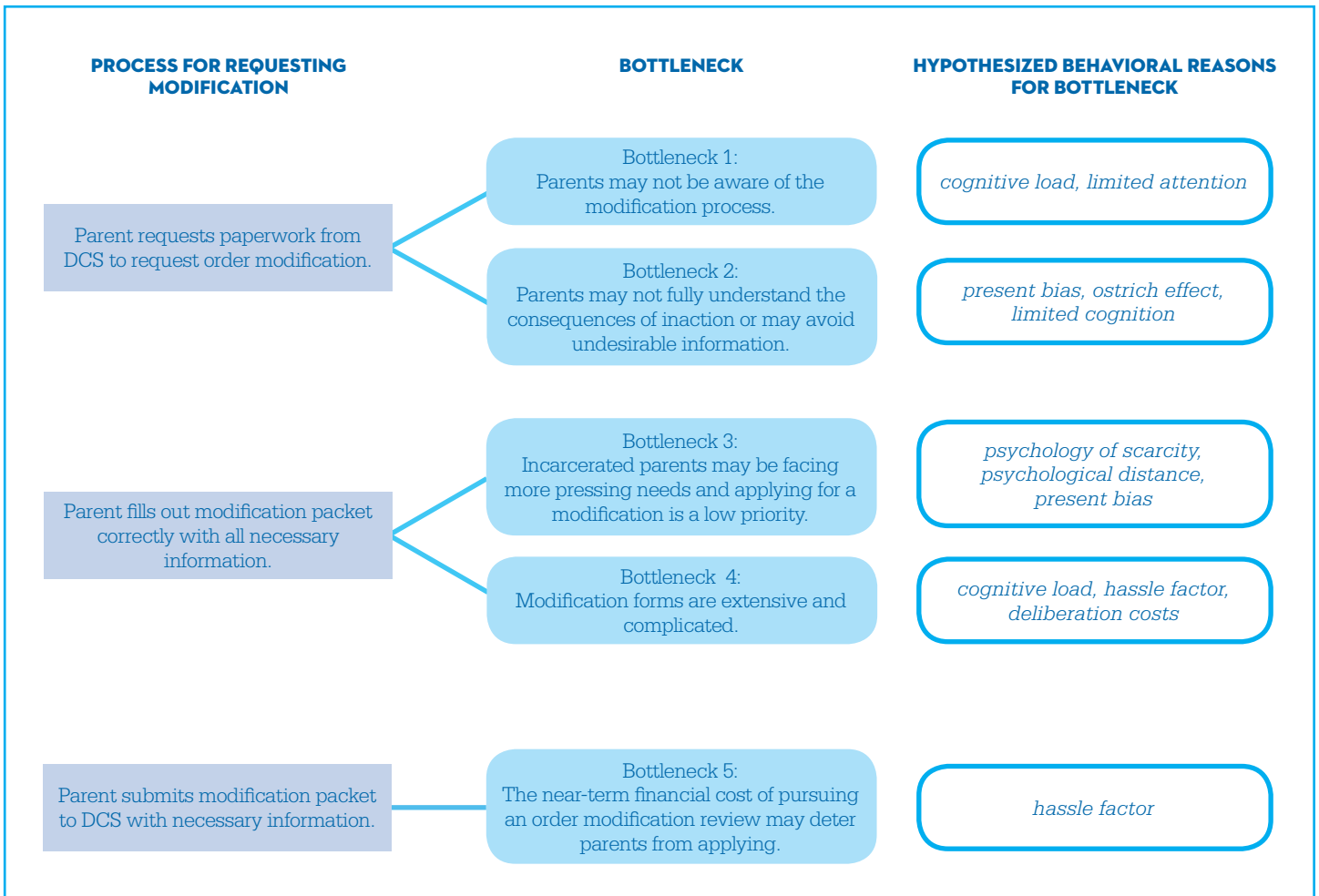
14 Noncustodial parents may have more than one order and may have both judicially and administratively established orders.

15 Individuals in prison have "trust accounts." Akin to bank accounts, these accounts serve as a means for incarcerated individuals to receive funds from friends or family that they can use (for example, to purchase items from the commissary). DCS has the statutory authority to garnish funds from these accounts, unless funds are specifically designated for postage, education, or qualified medical expenses. DCS had conducted similar mass garnishments from these accounts previously, though this garnishment was the first one in five years. These garnishments are in addition to regular withholding of earnings from prison jobs.

16 MacArthur (2012).

FIGURE 3 BEHAVIORAL MAP

WASHINGTON STATE DIVISION OF CHILD SUPPORT



▶ **Bottleneck 1: Incarcerated parents may not be aware of the modification process.** Incarcerated parents may not be aware that they are able to request an order modification review or that action on their part is required in order for a modification to occur. **Limited attention** makes it less likely that parents have full and correct information regarding what constitutes a formal request for modification. The complexity of the modification process and the forms parents must submit place a heavy **cognitive load** on them, resulting in misconceptions about what constitutes a request that may discourage parents.¹⁷

▶ **Bottleneck 2: Incarcerated parents may not fully understand the consequences of inaction or may avoid undesirable information.** Parents face long-term financial consequences if they do not request a modification to their child support orders. However, the natural tendency to focus on nearer-term concerns (**present bias**) makes it difficult for parents to take actions that are in their long-term self-interest. Parents may also find it difficult to understand the consequences of inaction with respect to their ongoing child support obligation (cognitive load). Even if they suspect there are negative consequences to inaction, they may have a tendency to avoid this undesirable information (**ostrich effect**).

¹⁷ For example, parents often believe that a letter to their case manager or a verbal request for a modification is sufficient to initiate the modification process. However, parents must submit the official modification packet in order to have their order reviewed through either the judicial or the administrative process.

▶ **Bottleneck 3: Incarcerated parents may be facing more pressing needs, and applying for a modification is a low priority.** Incarcerated parents, especially those who are newly incarcerated, are in a stressful environment where they may have more salient concerns than their child support obligations. The **psychology of scarcity** suggests that this stress may make it difficult for them to prioritize applying for a modification. Similarly, this present bias creates a situation in which the **psychological distance** of the benefits of pursuing a modification make it a low priority.

▶ **Bottleneck 4: Modification forms are extensive and complicated.** The forms provided to noncustodial parents who want a modification are extensive and complicated, and they contain much information that is unnecessary to request an order review.¹⁸ This excess information places a heavy cognitive load on parents. Formerly incarcerated noncustodial parents who had attempted to request modifications indicated that the forms were daunting and confusing, resulting in high **deliberation costs** and a substantial **hassle factor**. While the administrative and judicial modification processes differ, both require parents to navigate lengthy and complex sets of forms.

▶ **Bottleneck 5: The near-term financial cost of pursuing an order modification review may deter incarcerated parents from applying.** Noncustodial parents are required to pay for the envelope and postage when they send mail, which can represent both a financial burden and an added hassle factor. Even if he or she is making a small amount of money through a job in the prison, choosing to pay for the postage necessary to send the forms may mean prioritizing an action with potential, distant benefits over the purchase of other items that are more immediately necessary or that provide immediate gratification.

Design

The design of the study involved implementing a behaviorally informed communications strategy that specifically addressed critical bottlenecks identified in the current modification request process in Washington. The team decided to send additional communications to incarcerated noncustodial parents, which consisted of:

- Information about the opportunity for a modification
- Modification packet itself
- Tip sheet
- Postage-paid, pre-addressed envelope
- Reminders

The intervention materials sought to encourage incarcerated noncustodial parents to complete and mail the request forms for a child support order review. The team hypothesized that a series of mailed intervention materials would increase the number of parents requesting and receiving order modifications. In particular, conversations with formerly incarcerated parents indicated that incarcerated individuals are very attentive to their mail, both postal and electronic messages.

The intervention included sending electronic messages to incarcerated parents using JPAY, a proprietary system available to most individuals incarcerated in Washington State prisons.¹⁹ Box 3 provides more information about JPAY.

The intervention design focused on supplementing, rather than replacing, the current process because DCS did not want the BIAS team to alter the existing DCS notices. Altering existing forms

¹⁸ For example, though the modification request forms include fields for income information from both the custodial and noncustodial parent, they do not make it clear that the noncustodial parent is not expected to provide information on the custodial parent's earnings.

¹⁹ A portion of noncustodial parents do not have access to electronic messages. Newly incarcerated individuals, individuals in work release who are not housed in a prison, those in the medical unit, and those in intensive management units (for example, administrative segregation) do not always have access to the prison electronic mail system. For these noncustodial parents, DCS sent a letter in the place of the initial electronic message.

BOX 3 WHAT IS JPAY?

JPAY is a private company that provides an array of communications and financial services to jails and prisons across the country. The Washington State Department of Corrections contracts with JPAY to provide electronic messaging services to individuals incarcerated in the state's prisons. The interface is similar to e-mail, allowing prisoners to send and receive messages. However, it costs money to send messages — “e-stamps” cost between \$0.17 and \$0.33, depending on how many are purchased at one time. There is no cost to read messages.

would have required longer-term changes to DCS policy, which DCS did not want to undertake for this project. Similarly, DCS did not choose to pursue legislative changes that would have made the reduction of child support orders during incarceration the default. Instead, the study delivered a series of supports to incarcerated parents at different points in time to make them aware that they may be eligible for a modification and to move them from decision to action.

Table 1 summarizes the hypothesized relationships between bottlenecks identified in the diagnosis and the components of the intervention.

The communications strategy that was implemented for the study involved several phases. Figure 4 shows the sequence in which DCS distributed the intervention materials.

In order to address noncustodial parents' limited awareness of their ability to request a modification, it began with simple, electronic messages to incarcerated parents notifying them of the opportunity for a modification and a forthcoming modification packet in the mail. The message also used **loss aversion** to help noncustodial parents better understand the longer-term consequences of inaction, specifically the potential accumulation of debt over the course of their prison sentence.

The message included a list of three steps that the parent needed to take: read the message, get the application packet, and complete the forms. It emphasized that they had completed the first step and that the application packet was on its way, using the **endowed progress effect** to lower the perceived barriers to completion. In addition, it addressed the cognitive load associated with the process by using **social proof** — providing descriptive, factually accurate information about how peers behave in a similar situation — to convey to the recipient that other incarcerated noncustodial parents had already been successful with the process. The electronic message from DCS included a pre-paid “e-stamp” so that recipients could reply to DCS if they had any questions, relieving the financial barrier that might deter them from asking a question. Figure 5 presents the text of the JPAY message.

Shortly after sending the electronic message, DCS staff mailed a follow-up reminder letter notifying parents to check their electronic message account to ensure they would see the message, with the aim of increasing its potential for effectiveness.²⁰ The goal was for this letter to arrive roughly seven days after sending the JPAY message.

After sending the reminder letter, DCS automatically mailed modification packets to noncustodial parents, eliminating the need for parents to proactively request a packet. DCS also pre-populated the application with any available information, such as name, address, and case number. All of these components of the intervention were aimed at reducing hassle factors associated with the existing process.

The modification packet included a one-page tip sheet (Figure 6) aimed at addressing the cognitive load associated with completing the packet. The tip sheet gave suggestions in simple language for how to fill out forms. It was tailored to incarcerated parents, including suggestions for how to address questions on the forms that might not have a straightforward answer. The tip sheet focused on parts of the forms that, according to caseworkers, parents commonly left blank and used plain language to guide parents on how to address questions they might not feel equipped to answer.

²⁰ The research team used a letter (as opposed to a postcard, similar to what the BIAS team did in Texas) due to DCS privacy restrictions. DCS deemed that a postcard would identify the recipient as a noncustodial parent to anyone seeing the postcard.

**TABLE 1
HYPOTHESIZED RELATIONSHIPS BETWEEN BOTTLENECKS, BEHAVIORAL CONCEPTS,
AND PROPOSED COMPONENTS OF THE INTERVENTION**

WASHINGTON STATE DIVISION OF CHILD SUPPORT

HYPOTHESIZED BOTTLENECKS AND BEHAVIORAL CONCEPTS	INTERVENTION COMPONENTS					
	Simplified Messages	Loss Aversion	Social Proof	Reminders	Send Forms Automatically	Postage-Paid Response Option
INCARCERATED PARENTS MAY NOT BE AWARE OF THE MODIFICATION PROCESS.						
Cognitive load	✓		✓	✓	✓	
Limited attention	✓				✓	
INCARCERATED PARENTS MAY NOT FULLY UNDERSTAND THE CONSEQUENCES OF INACTION OR MAY AVOID UNDESIRABLE INFORMATION.						
Present bias		✓				
Ostrich effect		✓				
Cognitive load	✓					
INCARCERATED PARENTS MAY BE FACING MORE PRESSING NEEDS AND APPLYING FOR A MODIFICATION IS A LOW PRIORITY.						
Psychology of scarcity	✓	✓		✓	✓	
Psychological distance	✓	✓		✓	✓	
Present bias	✓	✓		✓	✓	
MODIFICATION FORMS ARE EXTENSIVE AND COMPLICATED.						
Cognitive load	✓			✓		
Hassle factor	✓			✓	✓	✓
Deliberation costs	✓			✓	✓	✓
THE NEAR-TERM FINANCIAL COST OF PURSUING AN ORDER MODIFICATION REVIEW MAY DETER INCARCERATED PARENTS FROM APPLYING.						
Hassle factor						✓

In order to address the near-term deliberation costs of requesting a modification and one of the hassle factors, the modification packet also included a postage-paid, pre-addressed envelope to return the forms.

Ten days following the intended receipt date of the modification packet, DCS sent follow-up electronic messages to parents reminding them to submit the forms, with the aim of increasing follow-through.

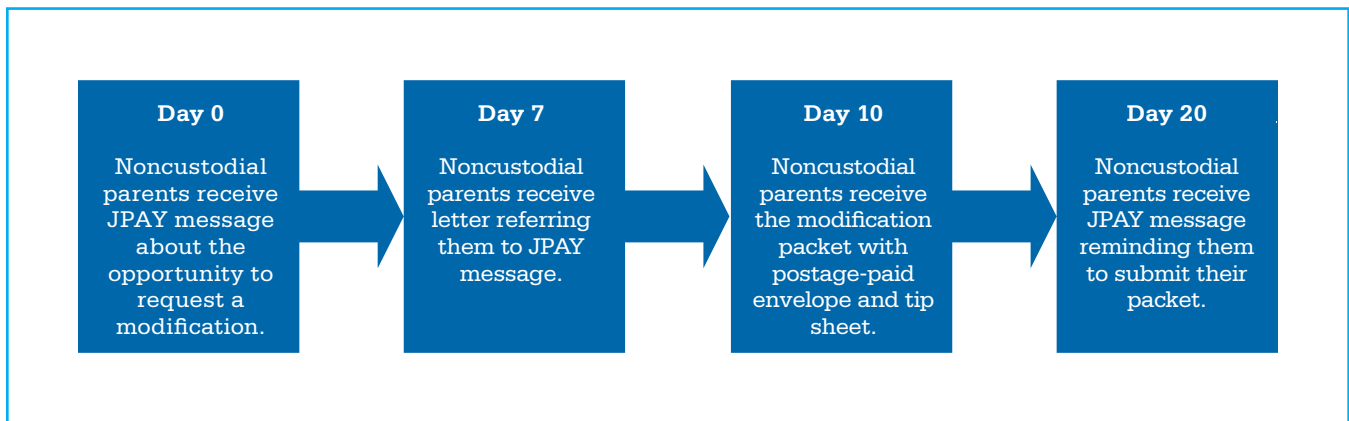
Test

Eligible noncustodial parents were randomly assigned to one of two groups:

- BIAS group that received an initial outreach message; added application assistance materials; application materials sent automatically and accompanied by a pre-addressed, postage-paid envelope; and a reminder
- Control group (status quo) that received ad hoc outreach and application materials sent to those who requested them

To be eligible for random assignment, noncustodial parents needed to owe current support and be likely eligible for a modification to their current support orders given DCS policies and practices. The eli-

FIGURE 4
MATERIALS SEQUENCE
WASHINGTON STATE DIVISION OF CHILD SUPPORT



gibility requirements for parents to participate in the sample varied based on whether their cases were established judicially or administratively.

For both judicial and administrative cases, the case must have originated in Washington and not already had a pending request for modification. For administrative cases, the current order had to be in excess of \$50 per month and the incarcerated parent had to have had an earned release date at least three months in the future.²¹ For judicial cases, the current order had to be in excess of \$150 per month and the incarcerated parent had to have had an earned release date at least 12 months in the future. Additionally, the youngest child on the case could be no more than 16 years of age.

A total of 827 noncustodial parents were randomized. The randomization occurred in 2015 across three cohorts — at the beginnings of February, March, and May. The research team used administrative data to track outcomes for three months following random assignment.²² For example, participants randomly assigned in March were followed through the end of May.²³

Characteristics of the Sample

Table 2 summarizes the characteristics of the sample at baseline. The sample, compared with the overall DCS noncustodial parent population, was disproportionately male — over 90 percent. Few (15.6 percent) had previously applied for a modification. For those who had a previous modification, it occurred, on average, 4.4 years earlier. The majority had administrative support orders.

There is substantial variation in circumstances of sample members. For example, while the average arrears amount among sample members was over \$12,000, it was driven by a small number of parents with especially high debt; roughly half the sample had debt below \$7,631. Similarly, while the average last payment amount was \$84, the last payment amount was \$6 or less for half the sample. Finally, the average number of months since a parent’s last payment was 7.7, though roughly half the sample had made a payment in the last 2.1 months. These differences suggest that a small subset of the sample may have had the means to meet large support obligations, but for many sample members the only payments being made were small ones. Additionally, the relatively few number of months since the last payment

21 An individual’s sentence may be reduced by earned release time for good behavior and good performance, as determined by the correctional agency having jurisdiction. DCS considers the expected remaining months of incarceration from the date of the order review request in determining eligibility. See Washington State Department of Corrections (2013).

22 In addition, the research team collected outcome data for six months post-random assignment for the first cohort.

23 The multiple points of random assignment were driven by the low initial number of eligible incarcerated parents and the attempt to have the largest possible sample size. The first cohort represented a mix of those who were recently incarcerated and those who had been in prison for a longer period of time and met the eligibility requirements. The subsequent cohorts were composed of parents who more recently met the eligibility criteria, either because they were newly incarcerated or had experienced some other change in circumstances that rendered them eligible.

FIGURE 5
JPAY MESSAGE
WASHINGTON STATE DIVISION OF CHILD SUPPORT

TO: **[PARENT NAME]**
FROM: **WA STATE DIVISION OF CHILD SUPPORT**
SUBJECT: **ACT NOW! INTERESTED IN POSSIBLY LOWERING YOUR
MONTHLY CHILD SUPPORT PAYMENT?**

Hello,

Are you interested in possibly **lowering the amount of child support you owe each month?** For example, your monthly support order could be lowered to \$50 or less. That's potentially hundreds to thousands of dollars of child support debt a year that you wouldn't need to face when you're released.

Other parents in prison have had their child support lowered by hundreds of dollars per month. Now it's YOUR turn to take action.

1. Read this email—you've already done this
2. Get the application—it's already on its way to you, check your mail
3. Complete the application—use the sheet included with the application to help you fill it out

You can respond to this email with any questions. Just use the prepaid stamp attached to this message.

I look forward to getting your application.

[Name of DCS Staff Person]

WA State Division of Child Support

FIGURE 6 TIP SHEET

WASHINGTON STATE DIVISION OF CHILD SUPPORT

Child Support Payments Can Be Lowered!

Other parents have
had their child
support lowered by
hundreds of dollars



*Don't let child support
debt weigh you down!*

All you have to do is fill out the forms and mail them back to
DCS to have your case reviewed.

Forms need to have:

1. A signature every place that asks for it.
2. A date next to every signature.
3. It's ok if you don't know the answer to every question. For example, you can write "I don't know" for anything you don't know the answer to.

Child's Present Address or Whereabouts

I DO NOT KNOW

4. If you don't know the answer, just tell us why. For example you can write "I am incarcerated."

NUMBER I PREFER TO USE FOR THE HEARING

I am incarcerated.

No person, because of race, color, national origin, creed, religion, sex, age, or disability, shall be discriminated against in employment, services, or any aspect of the program's activities. This form is available in alternative formats upon request.

TABLE 2
SELECTED CHARACTERISTICS OF SAMPLE MEMBERS AT BASELINE
WASHINGTON STATE DIVISION OF CHILD SUPPORT

CHARACTERISTIC	OVERALL	PROGRAM GROUP	CONTROL GROUP
Gender			
Male (%)	92.6	92.5	92.8
Noncustodial parent applied for modification before random assignment (%)	15.6	17.0	14.2
Application sent to claims officer team (%)	7.6	7.3	7.9
Application sent to prosecutor's office (%)	3.9	4.4	3.4
Average time since last modification (years)	4.4	4.2	4.5
Average number of child support cases	1.1	1.1	1.1
Average number of children	1.6	1.6	1.6
Average age of youngest child	7.8	7.6	7.9
Order type (%)			
Administrative	67.6	67.2	68.0
Judicial	36.4	37.0	35.8
Public assistance (%)			
Custodial parent currently receiving	28.1	30.7	25.5
Custodial parent previously received	60.6	56.5	64.7
Custodial parent never received	18.3	20.9	15.6
Average number of years with child support case	5.3	5.4	5.3
Average baseline child support order (\$)	256	265	247
Average baseline arrears (\$)	12,502	12,635	12,370
Average amount of last payment (\$)	84	101	67
Average months since last payment	7.7	7.4	7.9
Average years remaining on sentence	2.3	2.5	2.1
Sample size (N)	827	411	416

SOURCE: MDRC calculations using Washington State Division of Child Support data.

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

and the small average payment for most sample members may suggest that many of these payments were coming from regular withholdings from their inmate accounts.

Sample members had an average of 2.3 years left on their sentences. However, half of the sample had just 1.4 years remaining and roughly one-quarter of the sample had less than 9 months left on their sentence, suggesting that many sample members had sentence lengths that were only just above the eligibility requirement.

While sample members varied in the amount they owed and the length of their sentences, most had clear limitations regarding their ability to meet their child support obligations. When looking at average order amounts and time to release, the potential increase in debt is substantial. For example, assuming no ability to pay, a sample member with the average order amount and average number of years remaining on the individual's sentence would accumulate \$7,063 in arrears during the remaining time the individual is incarcerated.

Research Questions

The evaluation asked two main research questions regarding the effect of receiving the intervention materials compared with the control group:

- Does the intervention increase the percentage of noncustodial parents who submit an application?
- Does the intervention increase the percentage of noncustodial parents whose applications were deemed complete and forwarded to the prosecutor (if a judicial order) or to the claims officer team (if an administrative order)?

In addition to these main research questions, DCS also provided the data necessary to estimate the impact of the intervention on the percentage of noncustodial parents who obtained an order modification. However, the BIAS project's focus on short-term, proximal outcomes resulted in a relatively short observation period of three months. Consequently, the research team did not expect to see a substantial number of successful modifications within this timeframe, given the lengthy modification process.

Findings

This section presents the findings related to the implementation of the test, the effects on the full sample, and the effects on important subgroups.

Implementation

The program encountered some implementation challenges, which are discussed below. The primary consequence of these challenges was that it was more difficult to demonstrate impacts.

A portion of the BIAS group did not receive the program materials. DCS sent the application packet, JPAY messages, or both to 78 percent of the sample.²⁴ Those in the BIAS group who were not sent intervention materials were primarily parents who, despite DCS administrative data indicating eligibility for the sample at the point of random assignment, were not appropriate for the intervention. One common reason was that parents (or their caseworkers) had taken action to start the modification process shortly after random assignment, but before intervention materials went out. Also, there was a lag time between when DCS staff pulled the sample from its administrative database and when they received data from the Washington State Department of Corrections, resulting in a sample with some noncustodial parents who were not actually eligible (for example, based on their earned release date or a shift in order amount). Individuals in the BIAS group who were not sent the intervention materials were still part of the research sample for analytic purposes. The analysis was carried out without violating the experimental design.²⁵

Additionally, DCS sent one set of intervention materials to the first cohort in the incorrect order. The incorrect timing of the letter may have caused confusion among the noncustodial parents.²⁶

Despite these challenges, the level of DCS interaction with parents through electronic messages was encouraging. JPAY access varied by cohort, though there was a high level of response. Overall, 93 percent of the sample had JPAY access. A high percentage of BIAS group members responded to the JPAY message. Of those in the BIAS group who received a JPAY message, 50 percent responded (36 percent of

24 A greater proportion of the final cohort had recently initiated a modification, which may have been a function of increased awareness among DCS staff of the efforts to reduce the order amounts of incarcerated parents and staff taking individual initiative to reach out to parents on their caseloads.

25 Because post-random assignment eligibility checks were not performed for the control group, those BIAS group members who became ineligible after random assignment but before materials were sent out cannot be excluded from the sample without potentially biasing impact estimates.

26 As shown in Figure 4, there were four sets of communications that were designed to be sent to the noncustodial parents. Instead of the second item (the letter notifying noncustodial parents to check their electronic message inbox), DCS sent the paper version of the fourth item (the electronic message reminder to noncustodial parents to send in their modification packets). The same final reminder message was still sent out at the correct time after noncustodial parents received the modification packet.

TABLE 3
APPLICATION AND MODIFICATION OUTCOMES,
THREE-MONTH FOLLOW-UP
WASHINGTON STATE DIVISION OF CHILD SUPPORT

OUTCOME	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	STANDARD ERROR
Application submitted (%)	41.3	9.4	31.9***	2.9
Application forwarded to prosecutor or claims officer team (%)	33.9	7.8	26.1***	2.7
Modification granted (%)	18.3	2.3	16.0***	2.1
Sample size	411	416		

SOURCE: MDRC calculations using Washington State Division of Child Support 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 parents' baseline corrections system facility and monthly child support obligation to increase precision.

Rounding may cause slight discrepancies in differences.

the overall BIAS group). This response rate suggests that many of the noncustodial parents did read and understand the first message and were interested in the modification process. DCS staff noted that some noncustodial parents sent additional electronic messages with postage they purchased on their own, suggesting that electronic messages may be an effective communication method.

Impacts

The intervention had a large, statistically significant impact on the percentage of noncustodial parents submitting an application for a modification of their child support orders.²⁷ Table 3 presents application and modification outcomes from the test. With 9 percent of the control group submitting applications in the three months after random assignment, and 41 percent of the BIAS group submitting one in that same time period, there was a 32 percentage point impact on this outcome.

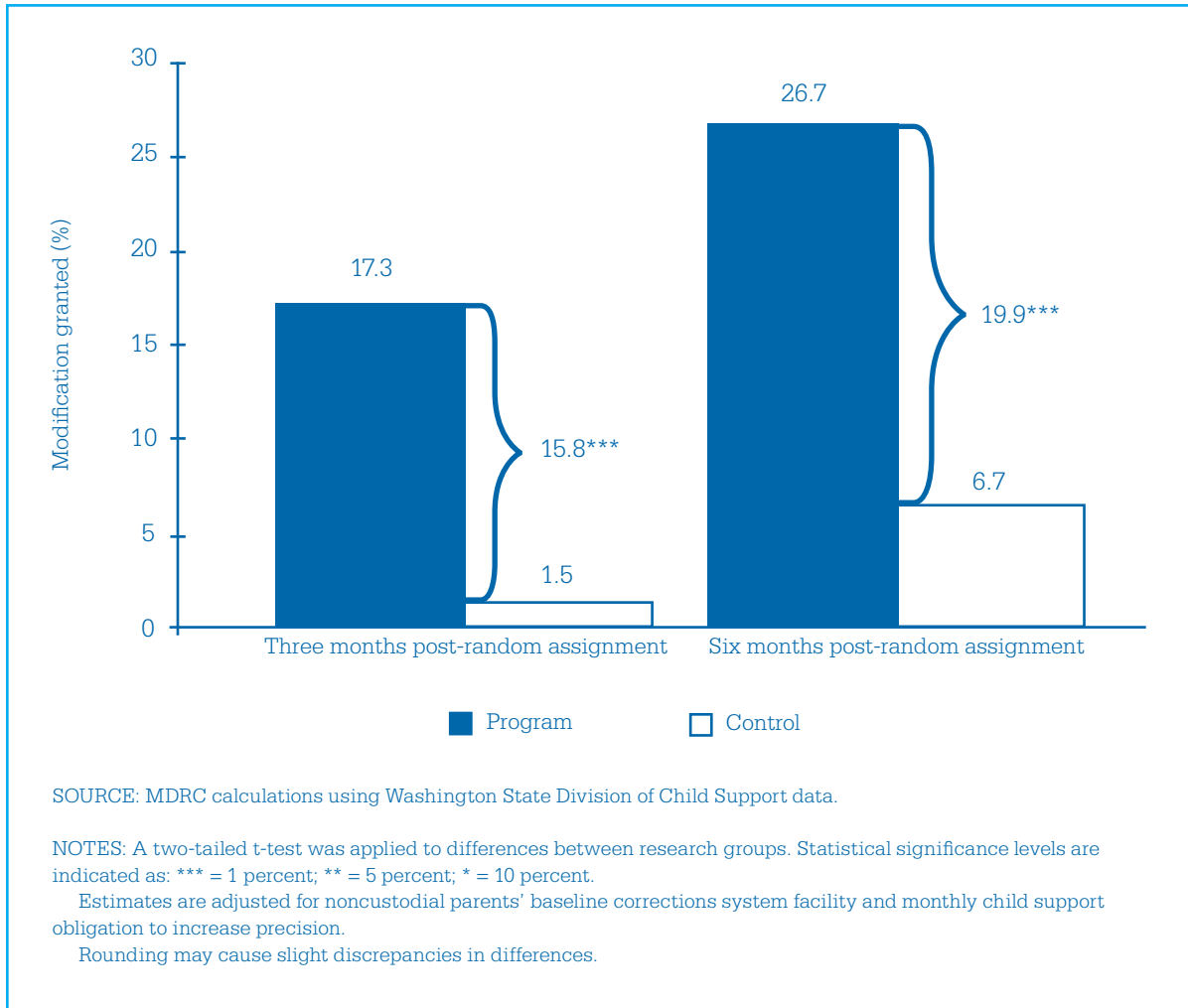
Similarly, there was a large, statistically significant impact on the number of applications that were deemed complete and forwarded to the prosecutor (if a judicial order) or to the claims officer team (if an administrative order). While 8 percent of the control group completed their application and had it processed, 34 percent of the BIAS group completed their application and had it processed. This difference signifies a 26 percentage point impact on forwarded applications — over a fourfold increase.

Overall, the analysis suggests that sending behaviorally informed reminders and information on how to apply for a modification increases the number of noncustodial parents who submit such an application. Furthermore, this increase in applications translated into increases in completed and forwarded applications.

The large, significant impacts on those two most proximal outcomes translated into an impact on a more distal outcome: successful modification of an order. Figure 7 shows modification outcomes at three and six months for the first cohort. Less than 2 percent of the control group had a modification granted during the three months of outcome tracking, but over 17 percent of the BIAS group did, resulting in a statistically significant 16 percentage point impact on modifications granted.

²⁷ Statistically significant impacts are effects that can be attributed with a high degree of confidence to the program rather than to chance alone.

FIGURE 7
COHORT 1 PROGRAM GROUP MODIFICATION OUTCOMES,
THREE MONTHS AND SIX MONTHS AFTER RANDOM ASSIGNMENT
WASHINGTON STATE DIVISION OF CHILD SUPPORT



The initial study design anticipated a three-month observation period, making it difficult to assert conclusions about the impacts on this distal outcome. However, implementation of the first cohort began early enough that it was possible to analyze six-month outcomes for this group.

Six-month outcomes for the first cohort show a larger, statistically significant impact on modifications granted. Of the control group, 7 percent had a modification granted, compared with the 27 percent of the BIAS group, resulting in a 20 percentage point impact on modifications granted.

While the extended observation period provides a clearer picture of the degree to which the intervention had a long-term impact on modifications, it is possible that even more sample members eventually received modifications as a result of their requests. Conversations with DCS staff suggest that the time required to receive a modification is often longer among incarcerated parents compared with the typical noncustodial parent. Limited phone access, delays in mailing, or parents being moved to different prison facilities can all delay the modification process.

Subgroup Analyses

The subgroup analyses explored the potential variation in impacts based on pre-specified subgroups. Appendix Tables 2 through 6 provide details on the subgroup analyses.

Impacts were greater for parents with administratively established orders. The research team expected a higher proportion of noncustodial parents with administrative orders to seek modifications, as there is less paperwork associated with the administrative process. Positive impacts were observed within both order types, but a significantly larger impact was seen on the main outcomes among those with administrative orders.

The impacts on modifications granted were also greater for male prisoners housed in the initial intake prison compared with men in other facilities across the state. The parents in the intake facility, primarily new entrants to the prison system, were more than twice as likely to have a modification granted, despite the fact that requests for modifications and modifications passed along to the prosecutor or claims officer team occurred at roughly the same rate. The dramatically higher success rate may reflect the fact that newly incarcerated parents likely have longer sentences than other incarcerated parents, making them more clearly eligible for a modification. Alternatively, it may be that staff in this facility were more accommodating to the scheduling requirements necessary to allow incarcerated parents to participate in the telephone hearings that are often part of the modification process.

There was no difference in the effectiveness of the intervention with respect to the number of children or amount of arrears parents had. The only statistically significant difference was a larger increase in applications passed on to the prosecutor or claims officer team among parents with only one child compared with those with multiple children. While it is difficult to interpret this difference in impacts when there is no such difference for application rates or modification rates, it may be a result of the fact that the forms require parents with only one child to fill out less information, thereby reducing the possibility of incorrectly entering information. There was also no difference in the effectiveness of the intervention with respect to noncustodial parent's gender.

Cost

The additional behavioral outreach was relatively low cost. The two primary cost categories for the intervention were: (1) printing and mailing costs associated with intervention materials and (2) staff time associated with distributing the materials.

The cost of materials was approximately \$10.46 per participant, which included the cost of printing, postage, and JPAY messages with the associated return postage.²⁸

The research team was not able to accurately capture staff time associated with implementation, largely because it was difficult to distinguish between time spent on research activities and the time that would be required simply to distribute the necessary implementation materials. DCS did report that the generation and mailing of forms required very little staff time. These processes are built into DCS's workflow, and the adaptations to them required for the intervention were minimal. However, communication with parents through electronic messages was labor intensive. JPAY is a system designed for one-on-one communication between incarcerated individuals and friends or family on the outside. It does not include functionality that easily allowed DCS to automate the messages or send them in batches.

Discussion of Findings

This intervention demonstrates the ability to use behavioral insights to increase requests for order modifications among incarcerated parents. The use of a coordinated messaging strategy mapped to critical behavioral bottlenecks resulted in positive increases in the number of requests for modifications and the percentage of requests that contained the necessary information to pass the initial stage of the process. Moreover, the study demonstrated that it is possible to show impacts on actual modifications granted in a relatively short period of time. In at least a subset of BIAS group cases, the requests for modifications resulted in a change in order amount.

²⁸ The cost was comparable for materials sent to individuals without access to JPAY: \$11.52 per participant.

The findings from this test reinforce earlier findings from the BIAS intervention in Texas, in which a similar strategy resulted in an 11 percentage point increase in requests for modifications.²⁹ They suggest that the multiple steps associated with pursuing an order modification and the complexity of these steps may be a substantial barrier to incarcerated parents requesting order modifications.

Moreover, these findings suggest that this approach can work in multiple policy environments; Texas requires all modifications for incarcerated parents to go through the judicial process, whereas Washington has a hybrid system for incarcerated parents that uses either a judicial or an administrative process, depending on how the order was initially established.

The impact of the intervention may be attributed to the delivery of materials that addressed the bottlenecks associated with the order modification process. However, the impacts also likely reflect the fact that the state made relatively minimal effort before the study to increase order modifications. Aside from sporadic efforts by individual staff members, DCS has made little concerted effort to target this population.

The findings in Texas illustrate this point. While the impact on modification requests in Texas was 23 percentage points less than in Washington, the actual percentages of parents in the BIAS group requesting a modification were quite similar, 41 percent in Washington and 40 percent in Texas. The difference in impacts may have been driven by the fact that whereas Texas was already conducting substantial outreach to incarcerated parents Washington was not, resulting in very different outcome levels for the control groups.

The Washington study also suggests the potential viability of electronic messages in supporting an increase in modification requests. Notwithstanding current limitations, electronic messaging represents a promising avenue for future exploration, both within the child support system as well as for other state agencies and programs, such as reentry programs, working with incarcerated individuals. However, the design of the current JPAY system does not make the intervention easily scalable. It is designed to support one-on-one communication between incarcerated individuals and their friends and families. Its features would need to be adapted to facilitate mass communication between public agencies and individuals who are incarcerated (for example, sending the same message to multiple recipients from a given list). Additionally, the current cost to individuals to send messages may be prohibitive.

This intervention targeted the behavior of individual parents. However, a systems-level approach, namely making a temporary downward modification for all incarcerated parents the default, may be a more efficient one to increase order modifications for incarcerated parents. Absent this approach, DCS could develop more systematic strategies for notifying incarcerated parents of the opportunity to request modifications. Currently, individual caseworkers have discretion as to whether or not to reach out to the individuals on their caseload, and the DCS systems do not automatically send modification materials to incarcerated parents or notify staff when parents on their caseload are incarcerated.

Areas for Future Research

This test demonstrates the impact behavioral interventions can have on how incarcerated parents handle their child support cases. The findings also suggest areas for further research.

A factorial experiment might provide a more granular picture of the relative impact of the different intervention components.³⁰ This intervention made parents aware of the opportunity (including several

29 Among the BIAS group in Texas, 39 percent of parents mailed an application, compared with 28 percent of the control group.

30 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 initial electronic message, the tip sheet in the modification package, the reminder message, 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. 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.

reminders), simplified the forms required in order to request the modification, and provided postage-paid envelopes. It may be that any one of these components would be sufficient to generate similar impacts.

Longer-term follow-up could explore the implications of the intervention. This follow-up includes analyzing impacts on modifications for a period longer than six months, since a longer analysis period would allow researchers to examine the overall percentage of modification requests that resulted in actual modifications. Without evidence that an actual order modification is indeed a viable option for the majority of those individuals who make the request, there is concern that future outreach would provide parents with an overly optimistic assessment of the likelihood of receiving a modification. This follow-up could also include diagnoses of why submitted applications were rejected. It may be that bottlenecks persist downstream that are hindering a subset of applications from being successful.

Finally, future research should seek to better understand the broader consequences of modification for this population. While much longer term, the imperative to reduce support obligations among this population is at least partially driven by the belief that stemming the accumulation of debt will ease the transition of these individuals out of prison, by increasing the potential for more stable employment and improving parenting outcomes and compliance with child support orders.

Next Steps

Behavioral economics provides a new way of thinking about the design of human service programs and a potentially powerful set of tools for improving program outcomes. The BIAS project offers the opportunity for continued hypothesis-testing grounded in behavioral economics and takes advantage of low-cost experimentation, which can include iterative, rapid-cycle tests. In addition to the research in Washington and work covered in earlier reports (see the list of previously published research at the back of this report), the BIAS project is publishing a final synthesis report in early 2017.

Two additional projects are building on the BIAS project. ACF's Office of Planning, Research and Evaluation is sponsoring the BIAS Next Generation project, which will expand the use of behavioral science to a wider range of ACF programs, go beyond testing simple nudges, include more implementation research, and develop tools to help program administrators and operators apply lessons from behavioral science to their work. Results from the BIAS Next Generation evaluations will be published as they become available to further inform this rapidly developing field. Additionally, in 2014, the Office of Child Support Enforcement launched a major initiative called Behavioral Interventions for Child Support Services (BICS). In the ongoing BICS demonstration project, MDRC and its partners are working with eight child support agencies to build on the early lessons from the BIAS project and apply insights from behavioral science to positively engage parents and improve program performance.

APPENDIX



APPENDIX TABLE A.1 BEHAVIORAL TERM DEFINITIONS

CONCEPT	DEFINITION	EXAMPLE TEXT
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.	Bertrand, Mullainathan, and Shafir (2004)
Deliberation costs	The costs — in time or in mental effort — of making a decision.	Pringle (2006)
Endowed progress effects	People who perceive advancements toward their goal exhibit greater persistence toward reaching their goal.	Nunes and Dreze (2006)
Hassle factors	A feature or situational detail that makes a behavior harder to accomplish. A hassle factor 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)
Limited attention	Limitations on people's ability to process information and to make choices regarding the subjects to which they pay more or less attention.	Sims (2003)
Loss aversion	The tendency for decisions and behavior to be influenced by the wish to avoid a loss. When a decision is framed in terms of a loss or a gain, it affects the decision maker's response. When loss aversion is operating, people experience a loss as more painful than when they experience an equivalent gain as pleasurable. For example, when loss aversion is at work, the pain of losing \$20 is greater than the pleasure of finding \$20. Thus, people's preferences are skewed toward avoiding the loss. For example, when program designers rely on loss aversion to increase the number of drivers who observe the speed limit, they believe that fining noncompliant drivers is more effective than rewarding compliant drivers.	Kahneman, Knetsch, and Thaler (1990)
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)
Present bias	Giving more weight to present concerns than to future ones. People tend to make plans to do unpleasant tasks "tomorrow," and make the same choice when "tomorrow" becomes "today."	Laibson (1997)
Psychological distance	The "distance" (spatial, temporal, or probable) between an individual and some outcome or decision. When an event is psychologically distant, it is perceived in an abstract manner and potentially important details are disregarded.	Ledgerwood, Trope, and Chaiken (2010)
Psychology of scarcity	The pressure of living life in poverty, which exacts a particularly high toll on cognitive resources.	Shafir and Mullainathan (2013)
Reminder	Prompting a specific piece of information to make it noticeable to an individual and increase the chances of acting on that information. Reminders often work when they are related to something the individual intends to do.	Karlan, McConnell, Mullainathan, and Zinman (2016)
Social proof	Directly or indirectly fostering a behavior through describing the behavior of others.	Gerber and Rogers (2009)

APPENDIX TABLE A.2
APPLICATION AND MODIFICATION OUTCOMES,
ORDER TYPE SUBGROUPS, THREE-MONTH FOLLOW-UP
WASHINGTON STATE DIVISION OF CHILD SUPPORT

OUTCOME	ADMINISTRATIVE ORDER			JUDICIAL ORDER			SUBGROUP DIFFERENCE
	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	
Application submitted (%)	45.4	7.2	38.2***	35.7	11.9	23.8***	++
Application forwarded to prosecutor or claims officer team (%)	38.9	7.2	31.8***	25.1	8.4	16.7***	+++
Modification granted (%)	26.1	3.2	22.9***	3.0	0.8	2.2	+++
Sample size	259	267		135	133		

SOURCE: MDRC calculations using Washington State Division of Child Support data.

NOTES: Sample members with both judicial and administrative orders were excluded from this analysis.

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 parents' baseline corrections system facility and monthly child support obligation to increase precision.

Rounding may cause slight discrepancies in differences.

APPENDIX TABLE A.3
APPLICATION AND MODIFICATION OUTCOMES,
FACILITY SUBGROUPS, THREE-MONTH FOLLOW-UP
WASHINGTON STATE DIVISION OF CHILD SUPPORT

OUTCOME	WASHINGTON CORRECTIONS CENTER (MEN'S)			OTHER MEN'S FACILITY			SUBGROUP DIFFERENCE
	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	
Application submitted (%)	41.2	11.0	30.2***	40.7	7.4	33.3***	
Application forwarded to prosecutor or claims officer team (%)	35.1	9.0	26.1***	33.7	5.8	27.9***	
Modification granted (%)	27.1	3.8	23.3***	11.1	1.4	9.7***	+++
Sample size	148	155		233	232		

SOURCE: MDRC calculations using Washington State Division of Child Support 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 parents' baseline corrections system facility and monthly child support obligation to increase precision.

Rounding may cause slight discrepancies in differences.

APPENDIX TABLE A.4
APPLICATION AND MODIFICATION OUTCOMES,
ARREARS SUBGROUPS, THREE-MONTH FOLLOW-UP
WASHINGTON STATE DIVISION OF CHILD SUPPORT

OUTCOME	LOW ARREARS (\$7,631.40 OR LESS)			HIGH ARREARS (MORE THAN \$7,631.40)			SUBGROUP DIFFERENCE
	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	
Application submitted (%)	39.6	7.7	31.9***	43.2	11.0	32.3***	
Application forwarded to prosecutor or claims officer team (%)	30.9	7.0	24.0***	37.3	8.3	29.0***	
Modification granted (%)	20.6	2.2	18.4***	16.3	2.4	13.9***	
Sample size	201	213		210	203		

SOURCE: MDRC calculations using Washington State Division of Child Support 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 parents' baseline corrections system facility and monthly child support obligation to increase precision.

Rounding may cause slight discrepancies in differences.

APPENDIX TABLE A.5
APPLICATION AND MODIFICATION OUTCOMES,
NUMBER OF CHILDREN SUBGROUPS, THREE-MONTH FOLLOW-UP
WASHINGTON STATE DIVISION OF CHILD SUPPORT

OUTCOME	ONE CHILD			MORE THAN ONE CHILD			SUBGROUP DIFFERENCE
	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	
Application submitted (%)	43.3	8.0	35.4***	38.3	11.5	26.8***	
Application forwarded to prosecutor or claims officer team (%)	37.1	6.8	30.3***	29.1	9.4	19.7***	†
Modification granted (%)	18.7	3.0	15.7***	17.7	1.4	16.2***	
Sample size	244	242		167	174		

SOURCE: MDRC calculations using Washington State Division of Child Support 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 parents' baseline corrections system facility and monthly child support obligation to increase precision.

Rounding may cause slight discrepancies in differences.

APPENDIX TABLE A.6
APPLICATION AND MODIFICATION OUTCOMES,
GENDER SUBGROUPS, THREE-MONTH FOLLOW-UP
WASHINGTON STATE DIVISION OF CHILD SUPPORT

OUTCOME	MALE			FEMALE			SUBGROUP DIFFERENCE
	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	
Application submitted (%)	41.0	8.9	32.1***	45.5	16.3	29.2**	
Application forwarded to prosecutor or claims officer team (%)	34.3	7.1	27.2***	28.3	17.4	11.0	
Modification granted (%)	17.4	2.3	15.2***	30.8	1.5	29.2***	
Sample size	380	385		31	30		

SOURCE: MDRC calculations using Washington State Division of Child Support 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 parents' baseline corrections system facility and monthly child support obligation to increase precision.

Rounding may cause slight discrepancies in differences.

REFERENCES

- Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir. 2004. "A Behavioral-Economics View of Poverty." *The American Economic Review* 94, 2: 419-423.
- Cancian, Maria, Carolyn Heinrich, and Yiyoon Chung. 2009. *Does Debt Discourage Employment and Payment of Child Support? Evidence from a Natural Experiment*. Madison, WI: Institute for Research on Poverty.
- Dechausay, Nadine, and Caitlin Anzelone. 2016. *Cutting Through Complexity: Using Behavioral Science to Improve Indiana's Child Care Subsidy Program*. OPRE Report 2016-03. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- Farrell, Mary, Caitlin Anzelone, Dan Cullinan, and Jessica Wille. 2014. *Taking the First Step: Using Behavioral Economics to Help Incarcerated Parents Apply for Child Support Order Modifications*. OPRE Report 2014-37. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- Gerber, Alan S., and Donald P. Green. 2000. "The Effects of Canvassing, Telephone Calls, and Direct Mail on Voter Turnout: A Field Experiment." *The American Political Science Review* 94, 3: 653-663.
- Gerber, Alan S., and Todd Roger. 2009. "Descriptive Social Norms and Motivation to Vote: Everybody's Voting and So Should You." *The Journal of Politics* 71, 1: 178-191.
- Kahneman, Daniel, Jack L. Knetsch, and Richard H. Thaler. 1990. "Experimental Tests of the Endowment Effect and the Coase Theorem." *Journal of Political Economy* 98, 6: 1325-1348.
- Kahneman, Daniel. 2011. *Thinking, Fast and Slow*. New York: Farrar, Straus and Giroux.
- Karlan, Dean, Margaret McConnell, Sendhil Mullainathan, and Jonathan Zinman. 2016. "Getting to the Top of Mind: How Reminders Increase Saving." *Management Science*. Website: dx.doi.org/10.1287/mnsc.2015.2296.
- Karlsson, Niklas, George Loewenstein, and Duane Seppi. 2009. "The Ostrich Effect: Selective Attention to Information." *Journal of Risk and Uncertainty* 38, 2: 95-115.
- Laibson, David. 1997. "Golden Eggs and Hyperbolic Discounting." *Quarterly Journal of Economics* 112, 2: 443-447.
- Ledgerwood, Alison, Yaacov Trope, and Shelly Chaiken. 2010. "Flexibility Now, Consistency Later: Psychological Distance and Construal Shape Evaluative Responding." *Journal of Personality and Social Psychology* 99, 32-51.
- MacArthur, A. 2012. *Department of Corrections: A Review of Positive and Negative Outcomes from the Universal Inmate Garnishment in 2012*. Washington, DC: Department of Social and Health Services, Division of Child Support.
- Nunes, Joseph C., and Xavier Drèze. 2006. "Your Loyalty Program Is Betraying You." *Harvard Business Review* 84, 4: 124.
- Pringle, Mark. 2006. "Deliberation Cost as a Foundation for Behavioral Economics." Pages 340-355 in Morris Altman (ed.), *Handbook of Contemporary Behavioral Economics: Foundations and Developments*. Armonk, New York: M.E. Sharpe, Inc.
- Richburg-Hayes, Lashawn, Caitlin Anzelone, Nadine Dechausay, Saugato Datta, Alexandra Fiorillo, Louis Potok, Matthew Darling, and John Balz. 2014. *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.
- Shafir, Eldar, and Sendhil Mullainathan. 2012. "On the Psychology of Scarcity." Presented at the Social Enterprise Leadership Forum, Columbia Business School, New York, May 18, 2012.
- Smith, Ben O., and Dustin R. White. 2016. "We Nudge and You Can Too! Informing Students of Grade Outcomes by E-mail or at the Bottom of Each Assignment." Social Science Research Network. Website: papers.ssrn.com/sol3/Papers.cfm?abstract_id=2726925.
- Sims, Christopher A. 2003. "Implications of Rational Inattention." *Journal of Monetary Economics* 50, 3: 665-690.
- Singal, Jesse. 2013. "Daniel Kahneman's Gripe with Behavioral Economics." *The Daily Beast* (April 26). Website: www.thedailybeast.com/articles/2013/04/26/daniel-kahneman-s-gripe-with-behavioral-economics.html.

- Thoennes, Nancy. 2002. "Child Support Profile: Massachusetts Incarcerated and Paroled Parents." Denver, CO: Center for Policy Research.
- United Kingdom Cabinet Office Behavioural Insights Team. 2011. *Applying Behavioural Insights to Charitable Giving*. London: Cabinet Office Behavioural Insights Team.
- United Kingdom Cabinet Office Behavioural Insights Team. 2013. *Applying Behavioural Insights to Charitable Giving*. London: Cabinet Office Behavioural Insights Team.
- Waller, Maureen R., and Robert Plotnick. 2001. "Effective Child Support Policy for Low-Income Families: Evidence from Street Level Research." *Journal of Policy Analysis and Management* 20, 89-110.
- Washington State Courts, Administrative Office of the Courts. 2015. "Washington State Child Support Schedule." Olympia, Washington: Washington State Courts, Administrative Office of the Courts. Website: www.dshs.wa.gov/sites/default/files/ESA/dcs/documents/WSCSS-PAMPHLET.pdf.
- Washington State Department of Corrections. 2013. "Earned Prison Release." Olympia, Washington: Washington State Department of Corrections. Website: www.doc.wa.gov/aboutdoc/docs/ERDFactSheetFY2013.pdf.
- Washington State Department of Social and Health Services, Division of Child Support. 2013a. "Child Support Order Review Request." Olympia, Washington: Department of Social and Health Services, Division of Child Support. Website: www.dshs.wa.gov/sites/default/files/ESA/dcs/documents/09-741.pdf.
- Washington State Department of Social and Health Services, Division of Child Support. 2013b. "Confidential Information Form (INFO)." Olympia, Washington: Washington State Department of Social and Health Services, Division of Child Support. Website: www.dshs.wa.gov/sites/default/files/ESA/dcs/documents/WPFDRPSCU09-0200.pdf.
- Washington State Department of Social and Health Services, Division of Child Support. 2013c. "Petition for Modification – Administrative Order." Olympia, Washington: Washington State Department of Social and Health Services, Division of Child Support. Website: www.dshs.wa.gov/sites/default/files/ESA/dcs/documents/09-280b.pdf.
- Washington State Supreme Court. 2006. "Financial Declaration (FNDCLR)." Olympia, Washington: Superior Court of Washington. Website: www.courts.wa.gov/forms/documents/DRPSCU1_1550.pdf.

EARLIER PUBLICATIONS

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Framing the Message: Using Behavioral Economics to Engage TANF Recipients
2016. Farrell, Mary, Jared Smith, Leigh Reardon, and Emmi Obara. OPRE Report 2016-02. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services

Nudges for Child Support: Applying Behavioral Insights to Increase Collections
2016. Baird, Peter, Dan Cullinan, Patrick Landers, Leigh Reardon. OPRE Report 2016-01. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services

Engaging Providers and Clients: Using Behavioral Economics to Increase On-Time Child Care Subsidy Renewals
2015. Mayer, Alex, Dan Cullinan, Elizabeth Calmeyer, Kelsey Patterson. OPRE Report 2015-73. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services

The Power of Prompts: Using Behavioral Insights to Encourage People to Participate
2015. Dechausay, Nadine, Caitlin Anzelone, Leigh Reardon. OPRE Report 2015-75. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services

Reminders to Pay: Using Behavioral Economics to Increase Child Support Payments
2015. Baird, Peter, Leigh Reardon, Dan Cullinan, Drew McDermott, and Patrick Landers. OPRE Report 2015-20. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services

Taking the First Step: Using Behavioral Economics to Help Incarcerated Parents Apply for Child Support Order Modifications
2014. Farrell, Mary, Caitlin Anzelone, Dan Cullinan, and Jessica Wille. OPRE Report 2014-37. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services

Behavioral Economics and Social Policy: Designing Innovative Solutions for Programs Supported by the Administration for Children and Families

2014. Richburg-Hayes, Lashawn, Caitlin Anzelone, Nadine Dechausay, Saugato Datta, Alexandra Fiorillo, Louis Potok, Matthew Darling, and John Balz. 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

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