



FRAMING THE MESSAGE

Using Behavioral Economics to Engage TANF Recipients

OPRE Report 2016-02
March 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.

This report presents findings from an intervention designed to increase the number of Temporary Assistance for Needy Families (TANF) recipients in Los Angeles who “reengaged” in the county’s welfare-to-work program. Some adults with young children had been exempt from participating in the welfare-to-work program, but this exemption ended in 2013 due to a change in state policy. In late 2013, Los Angeles County began scheduling appointments with formerly exempt parents to bring them into the welfare-to-work program and engage them in program activities. The county made at least four attempts to contact participants and inform them of the new requirements prior to the appointment: sending two notices, 60 days and 30 days before the appointment, and placing two reminder calls, 10 days and 3 days before the appointment. Despite all of this communication, only about half of the participants who received a reengagement notice between September 2013 and January 2014 attended the scheduled mandatory reengagement appointment.

The BIAS team tested sending additional, behaviorally informed materials to participants one week before the reengagement appointment. The team designed two different notices that employed behavioral techniques; one highlighted the losses participants might experience by not attending the appointment and the other highlighted the benefits they might gain by attending.

Participants were randomly assigned to one of three groups: (1) a program group that received the gain-framed notice; (2) a program group that received the loss-framed notice; or (3) a control group, which did not receive additional materials. The test found that receiving an additional behavioral message increased the percentage of program group members who engaged in the program within 30 days of their scheduled appointment by a statistically significant 3.6 percentage points. This increase was largely driven by the loss notice, which increased engagement at 30 days by 4.4 percentage points, while the gain notice, when compared with the control condition, did not produce a statistically significant impact at 30 days. No impacts were found for either group after 60 and 90 days. The behavioral outreach did not significantly reduce the percentage of participants sanctioned by the program for nonparticipation after 60 and 90 days.

This intervention was added to a fairly intensive campaign to increase engagement among TANF recipients. Given that this was one additional piece of mail on top of at least four other attempts to reach participants and convey the importance of participating, it is notable that it helped participants to engage earlier than they would have otherwise.

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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 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 Los Angeles County Department of Public Social Services (DPSS). The intervention was designed to increase the number of Temporary Assistance for Needy Families (TANF) recipients in Los Angeles who “reengaged” in the county’s welfare-to-work program (called Greater Avenues to Independence, or GAIN). Some adults with young children had been exempt and did not have to participate in GAIN work activities, but lost this exemption in 2013 due to a change in state policy. BIAS evaluated the impact on reengagement of using two different messaging strategies that both employed behavioral techniques; one highlighted the losses participants might experience by not attending a required appointment and the other highlighted the benefits they might receive by attending.

California Reengagement Process

In July 2009, California temporarily exempted from its welfare-to-work program all families who were receiving cash assistance and who had a young child between 12 and 23 months old or two or more children under age 6. The state made this change in policy in order to temporarily save money on child care and transportation costs. In 2013, after the state’s fiscal condition improved, the temporary exemption ended and the state instructed counties to notify formerly exempt parents of this change and reengage them into the county’s GAIN program by December 2014. To begin the reengagement process, DPSS scheduled appointments with these parents from October 2013 through September 2014.

DPSS made four attempts to contact participants and inform them of the new requirements prior to the appointment: (1) a complicated 3-page letter was mailed 60 days before the appointment informing them of the change in policy; (2) a 10-page packet of information was mailed 30 days before the appointment with the specific appointment time and date; (3) a system-generated reminder call was made 10 days before the appointment; and (4) a personal call from a GAIN worker was made 3 days before the appointment.

Participants who attended the appointment began the process of developing a plan, referred to as a welfare-to-work plan, designed to put participants on a pathway to self-sufficiency. Some participants provided evidence qualifying them for a different exemption or were referred and connected to specialized support services for substance abuse, mental health, domestic violence, or homelessness issues. Signing a welfare-to-work plan, qualifying for an exemption, or being referred to specialized support services ended the reengagement process. This report refers to participants who achieved one of these three outcomes as “positively engaged.” Note that DPSS considered as reengaged a participant who failed to attend the appointment and, as a result, was sanctioned for noncompliance, though this study does not categorize sanctions as a positive engagement outcome.

Behavioral Intervention

DPSS expressed interest to the BIAS team in increasing the percentage of participants who attended the initial reengagement appointment. This increase would reduce the staff burden resulting from having to re-schedule appointments with participants. Additionally, the county assumed that participants who attended the initial appointment would reengage more quickly. An early review of data collected by DPSS revealed that many participants failed to attend the appointment, leading to noncompliance, which delayed the reengagement process. As a result, because it took time to bring participants into compliance or implement sanctions, DPSS risked failing to meet the state's December 2014 reengagement deadline.

Because of state and county policy, the BIAS team could not alter the existing DPSS notices or amend the reengagement outreach process. However, it could create additional materials to send to participants with reengagement appointments. The BIAS team hypothesized that mailing a simplified, more salient notice to participants would increase the percentage who attended the reengagement appointment. The notice also included a personalized sticky note from the case manager, since research suggests that personalization can help make communications less generic and create a sense of reciprocity.¹ The team designed two sets of notices and sticky notes that differed from one another in that one set emphasized the benefits participants would gain by attending the reengagement appointment and the other set emphasized the losses they might incur by failing to do so. The team chose to test both a gain-framed and loss-framed message because behavioral research has shown that how information is presented can greatly affect decision making and it was not clear which message would be more effective in this setting.²

Findings

The test focused on 2,442 participants who were mandated to attend a reengagement appointment scheduled between July 2014 and September 2014. Participants with a scheduled reengagement appointment were randomly assigned to one of three groups:

- Gain group, which received a gain-framed notice with sticky note
- Loss group, which received a loss-framed notice with sticky note
- Control group (status quo), which did not receive additional materials

Participants in the program groups were mailed the notice with a sticky note approximately one week before their scheduled appointment. These materials were sent in addition to the status quo outreach sent by DPSS.

Key findings from the pilot include the following:

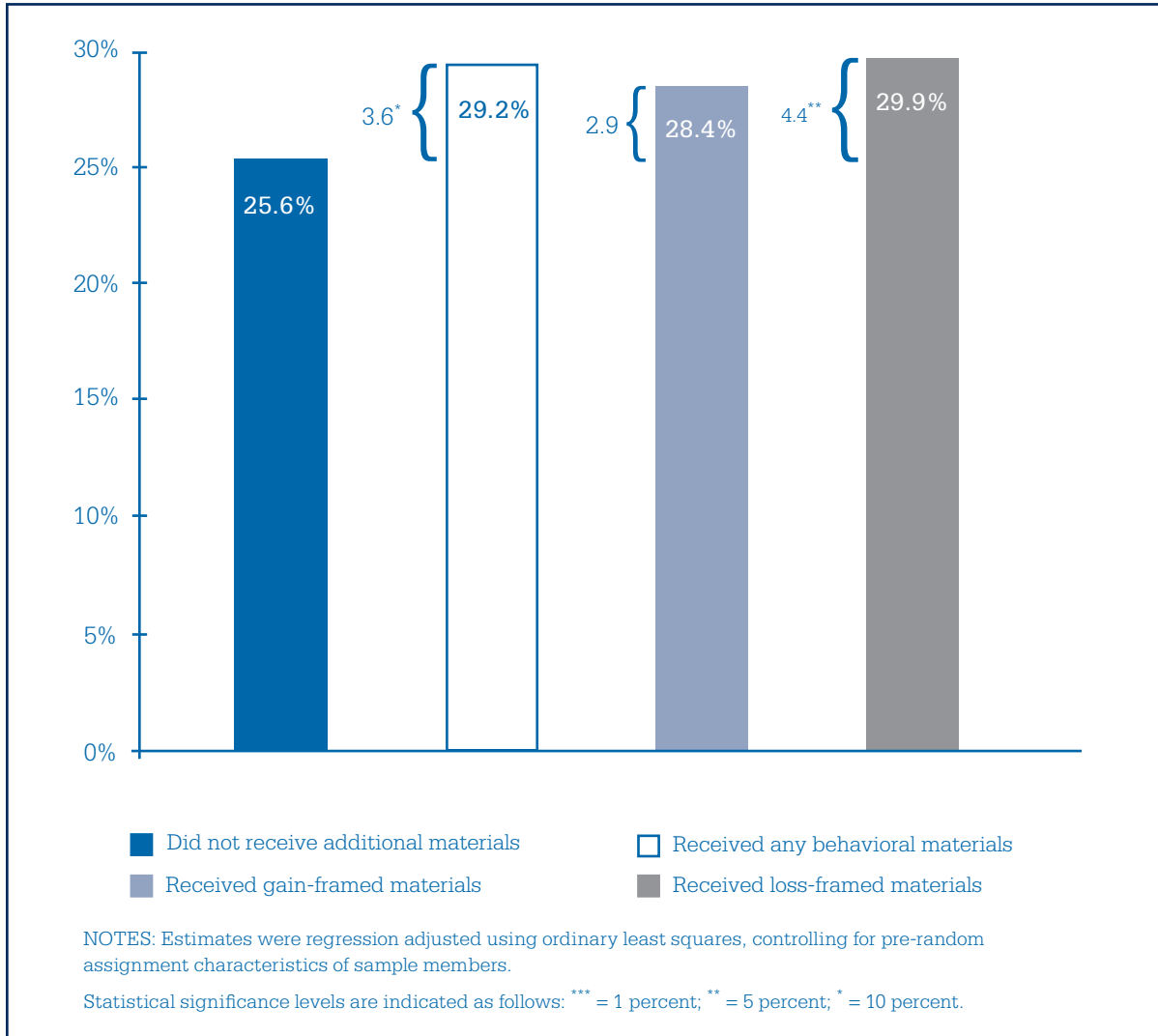
- As Figure ES. 1 shows, the additional behavioral outreach increased the percentage of program group members who took action and became positively engaged 30 days after their scheduled appointment by 3.6 percentage points, from 25.6 percent to 29.2 percent, a difference that is statistically significant. There was no statistically significant difference after 60 days (not shown). Thus, the behavioral materials encouraged some participants to attend the appointment or provide evidence of an exemption earlier than they would have without the additional notice.
- The loss notice, when compared with no additional outreach, increased positive engagement at 30 days by 4.4 percentage points. The gain notice, when compared with no additional outreach, did not produce a statistically significant impact at 30 days. No impacts were found for either group after 60 and 90 days. The findings suggest that participants responded more to the threat of losing benefits than the promise of receiving benefits.

1 Randy Garner, "Post-it Note Persuasion: A Sticky Influence," *Journal of Consumer Psychology* 15, 3: 230-237 (2005).

2 For an example of research that found participants responded to losses, see Tanjim Hossain and John A. List, "The Behavioralist Visits the Factory: Increasing Productivity Using Simple Framing Manipulations," NBER Working Paper No. 15623. (Cambridge, MA: National Bureau of Economic Research, 2009). For an example of research that found participants responded to gains, see Benjamin A. Toll, Stephanie S. O'Malley, Nicole A. Katulak, Ran Wu, Joel A. Dubin, Amy Latimer, Boris Meandzija, Tony P. George, Peter Jatlow, Judith L. Cooney, and Peter Salovey, "Comparing Gain- and Loss-Framed Messages for Smoking Cessation with Sustained-Release Bupropion: A Randomized Controlled Trial," *Psychology of Addictive Behaviors* 21, 4: 534-544 (2007).

FIGURE ES.1
PERCENTAGE POSITIVELY ENGAGED 30 DAYS AFTER SCHEDULED
APPOINTMENT DATE, BY RESEARCH GROUP

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- The behavioral outreach did not significantly reduce the percentage of participants who were sanctioned. The lack of statistically significant differences on sanctions may reflect the length of time it takes for sanctions to be imposed and the many opportunities for participants to come into compliance once they miss the initial appointments.

This intervention was added to a fairly intensive campaign to increase engagement among the population. Given that this was one additional piece of mail on top of at least four other attempts to reach participants and convey the importance of participating, it is notable that it helped participants positively engage earlier than they would have otherwise.

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 the low-cost, iterative nature of rapid-cycle experimentation. In addition to the Los Angeles TANF research and work covered in earlier reports (see the list of previously published research at the back of this report), the BIAS project has completed evaluations with other partners, including the Indiana Office of Early Childhood and Out-of-School Learning and the Washington State Division of Child Support. Results from these evaluations will be published as they become available to further inform this rapidly developing field.

FRAMING THE MESSAGE

Using Behavioral Economics to Engage TANF Recipients

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. For more information about behavioral economics, see Box 1.

This report presents findings from a behavioral intervention, developed in collaboration with the Los Angeles County Department of Public Social Services (DPSS). The intervention was designed to increase the number of Temporary Assistance for Needy Families (TANF) recipients in Los Angeles who “reengaged” in the county’s welfare-to-work program (called Greater Avenues to Independence, or GAIN). These recipients had been exempt from participating in GAIN based on the age of their children, but lost this exemption in 2013 because of a change in state policy, and thus needed to reengage with the program. BIAS evaluated the impact on reengagement of using two different messaging strategies that employed behavioral techniques; one highlighted the losses participants might experience by not attending a required reengagement appointment, and the other highlighted the benefits they might receive by attending. Interventions shown to be effective in engaging this population could help state and local TANF programs seeking to engage TANF recipients in their welfare-to-work programs.

The report begins with a summary of the reengagement process in Los Angeles. It then describes how the BIAS team applied a method called “behavioral diagnosis and design” to anticipate reasons people might not attend the reengagement appointment, and used this information to design low-cost behaviorally informed messages to encourage attendance. The remainder of the report presents results from the experiment.

Background on the Reengagement Process

California operates a state-supervised, county-administered TANF program (called California Work Opportunities and Responsibility to Kids, or CalWORKs), whereby the state establishes the TANF policies but counties have some discretion in how they implement the policies. The state requires that all CalWORKs adult cash assistance recipients participate in the various counties’ welfare-to-work programs unless they qualify for an exemption. The welfare-to-work program assigns individuals to activities (such as job search assistance, community service, employment, education, or specialized supportive services) to help participants attain self-sufficiency.¹ This report describes how Los Angeles County implemented a change in state policy.

In July 2009, California temporarily exempted from its welfare-to-work program all families who were receiving cash assistance and who had a young child between 12 and 23 months old or two or more children under age 6 years. The state made this change in policy in order to temporarily save money on child

1 The state must meet its federal work participation rate requirement, which measures the degree to which families receiving cash assistance funded by TANF and state Maintenance of Effort dollars are engaged in work activities specified under federal law, or it faces a potential reduction of block funding from the federal government.

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.⁷ 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, planning and commitment devices can be used to improve self-control, and default rules can produce positive outcomes even for people who fail to act. Over the past decade, behavioral economics has gained popularity in the private and public sectors. In one study, researchers examined how the framing of financial incentives for teachers affected student achievement. Teachers in incentive programs (the gain condition) traditionally receive their payments at the end of the year. In this study, a program group of teachers, the loss group, instead received the expected value of the incentive at the beginning of the year and were told that if their students' performance was below average they would need to return a proportion of the incentive. Students with teachers in the loss group scored higher on their math tests than those with teachers in the gain condition.[†] The BIAS team previously partnered with the Cuyahoga County (Ohio) Office of Child Support Services to design and evaluate a number behaviorally informed, low-cost reminders notices, text messages, and “welcome” letters. The team found that the reminder notices and text messages increased the percentage of parents making a child support payment by over 2 percentage points, replicating findings from earlier BIAS tests in Franklin County, Ohio.[‡]

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).

†Fryer, Levitt, List, and Sadoff (2012).

‡Baird, Cullinan, Landers, and Reardon (2016).

§Singal (2013).

||Richburg-Hayes et al. (2014).

care and transportation costs, as the state helps parents pay for these costs when they are assigned to participate in a welfare-to-work activity. In 2013, after the state's fiscal condition improved, the temporary exemption ended.

As the state phased out the temporary exemption, the counties needed to develop strategies to reengage TANF households that had previously been exempt from welfare-to-work requirements. Communicating this shift and effectively reengaging this population became a high priority for counties. Starting on January 1, 2013, DPSS gave no new temporary young child exemptions to families and had until December 2014 to reengage exempt parents who were on the caseload in December 2012. Approximately 14,000 CalWORKs clients in Los Angeles County were receiving the temporary young child exemption at the time of the policy change and needed to be reengaged. Box 2 provides more information on the changes made to the exemption policy for parents with young children.

Outreach to the Population Targeted for Reengagement

Rather than inform all parents at once of the policy change, which would have overburdened the program and limited its ability to serve new participants effectively, DPSS began informing parents on a rolling basis, based

BOX 2

CALWORKS EXEMPTIONS FOR PARENTS WITH YOUNG CHILDREN

Prior to July 2009

- Parents with a child under 12 months of age received a 12-month, one-time exemption.
- Parents with a child under 6 months of age were exempted, though had to first use the one-time exemption.*

July 2009 until January 2013[†]

- Same exemptions as above plus the following *temporary* exemptions:
 - Parents with a child between 12 and 23 months of age or two or more children under age 6 years received a temporary exemption.
 - Parents with a child between 6 and 12 months of age and who had received a one-time exemption were exempted per county policy.

January 2013

- Parents with a child under 24 months of age received a 24-month, one-time exemption.
- Parents with a child between 6 and 12 months of age received a 12-month, one-time exemption.
- Parents with a child under 6 months of age were exempted, though had to first use the one-time exemption.

*Parents can be exempted only once in their lifetime.

[†]Starting January 2013, there were no new temporary exemptions, though participants who qualified in December 2012 could receive one until they started the reengagement process. (The last individuals to qualify received exemptions that ended July 2014.)

on the month when the family was required to recertify its CalWORKs benefits. DPSS scheduled reengagement appointments monthly from October 2013 to September 2014. To facilitate the scheduling process, the DPSS management information system assigned the date and time of the appointment, but participants could call to reschedule the appointment if they were not available at the given time. DPSS made at least four attempts to contact participants and inform them of the new requirements prior to the appointment.

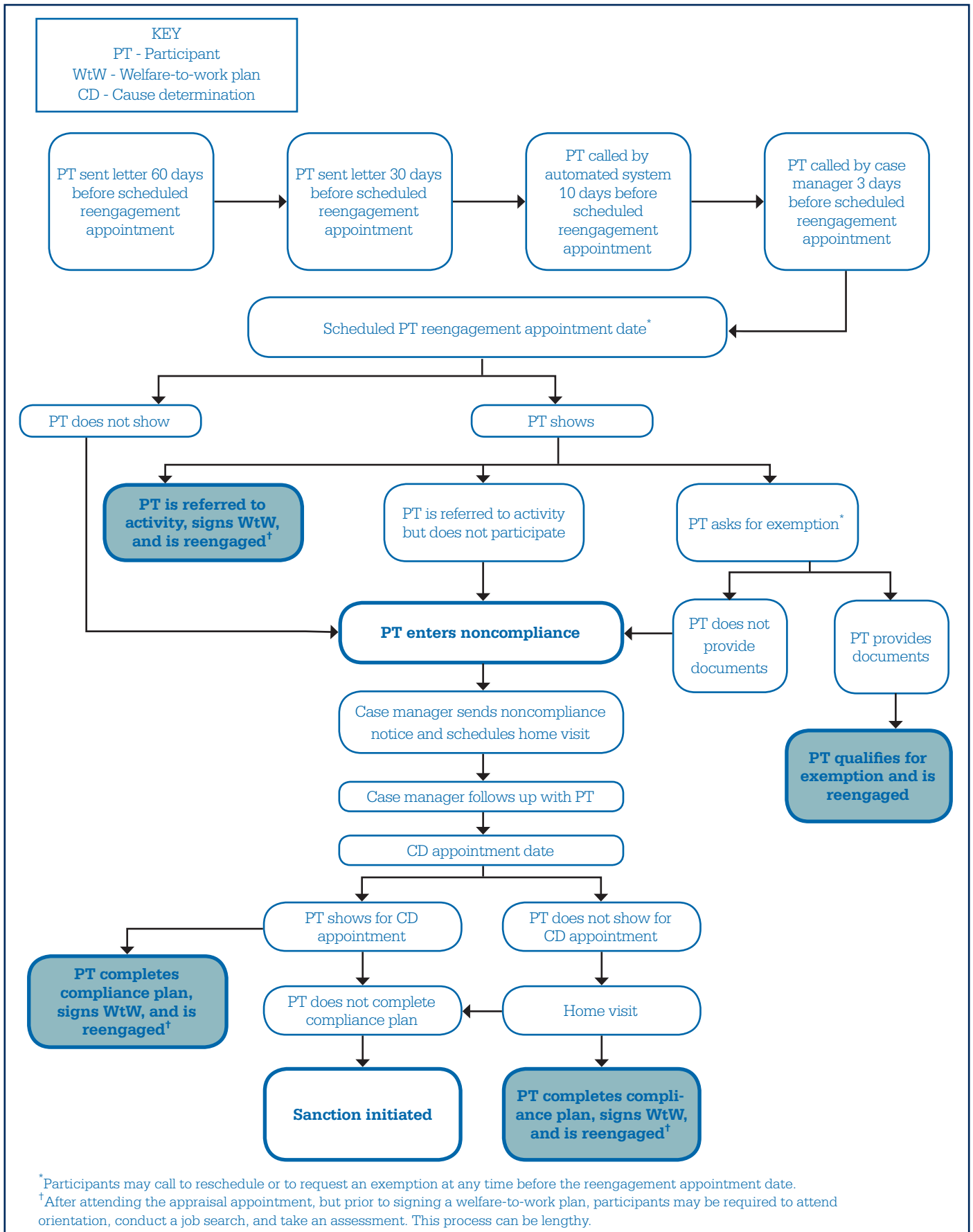
- *Contact 1 — 60 days before the appointment.* DPSS sent participants a 3-page notice informing them of the change in state policy and letting them know a case manager would be contacting them. The appointment date and time were not included in this letter.
- *Contact 2 — 30 days before the appointment.* DPSS sent participants a 10-page packet containing (1) a 1-page notice that indicated the appointment date and time, (2) a copy of the earlier 3-page letter, (3) a 2-page form to be completed if they qualified for another exemption, (4) a 2-page medical information release form for requesting a medical exemption, and (5) a 2-page form that notified participants in 17 languages to contact their case manager and of their right to an interpreter.
- *Contact 3 — 10 days before the appointment.* An automated system called participants with a reminder about their appointment.
- *Contact 4 — 3 days before the appointment.* A case manager personally called the participants reminding them about their appointment. DPSS instructed case managers to make a minimum of three attempts to reach a participant, unless the phone number was disconnected or wrong.

The Reengagement Process

Attending the scheduled reengagement appointment was the first step in being reengaged. As Figure 1 illustrates, the reengagement process was lengthy and involved multiple steps. For most participants (87 percent of participants with appointments from October 2013 to January 2014), the process began with an appraisal during the reengagement appointment to determine an appropriate work, education,

FIGURE 1 GAIN MANDATORY PARTICIPANT REENGAGEMENT FLOW CHART

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or other activity referral that met program requirements.² This referral often consisted of a multi-stage process that could take several months to complete, particularly for participants who were not currently participating in any activities. For example, after the appraisal appointment, case managers typically referred participants to an orientation, job club, and assessment.³ At the end of this process, after the participant found an activity that met program requirements based on personalized assessment results, he or she signed a welfare-to-work plan, which ended the reengagement process.

DPSS did not require participants who qualified for another exemption to develop a welfare-to-work plan, but required them to provide documentation to verify that they qualified for the exemption. Participants eligible for another exemption could conduct the meeting over the phone. Once participants provided documentation for an exemption, the county classified the participants as reengaged but exempt.⁴ Similarly, participants who were referred and connected to specialized support services for substance abuse, mental health, domestic violence, or homelessness issues did not sign a welfare-to-work plan, but were considered reengaged when the county documented this service receipt.

If a participant with a mandatory reengagement appointment failed to attend the meeting, call to reschedule the meeting, or provide documentation of an exemption, the individual was placed into non-compliance status. At that point, DPSS staff took steps to bring the participant into compliance, including attempting to contact the participant, sending a good cause determination form that the participant could complete if the participant provided a good reason for not complying with program requirements, scheduling a cause determination appointment, and conducting a home visit. If the individual's noncompliance was not resolved, the county sanctioned the participant, which ended the reengagement process. A sanction in California removes the noncompliant participant from the CalWORKs case, which, in Los Angeles, can reduce the monthly CalWORKs cash assistance benefit by as much as \$333.⁵

The reengagement process ended when a participant signed a welfare-to-work plan, qualified for an exemption, or was referred to specialized support services. This report refers to participants who achieved one of these three outcomes as "positively engaged." Note that DPSS considered as reengaged a participant who failed to attend the appointment and, as a result, was sanctioned for noncompliance, though this study does not categorize sanctions as a positive engagement outcome.

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.⁶ As depicted in Figure 2, the behavioral diagnosis and design process consists of 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 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 hypoth-

2 The analysis was limited to those who were considered "mandatory" and required to attend the reengagement meeting. Some participants had received a temporary exemption, but had been fully participating in the welfare-to-work program as "volunteers." They were not required to attend the meeting.

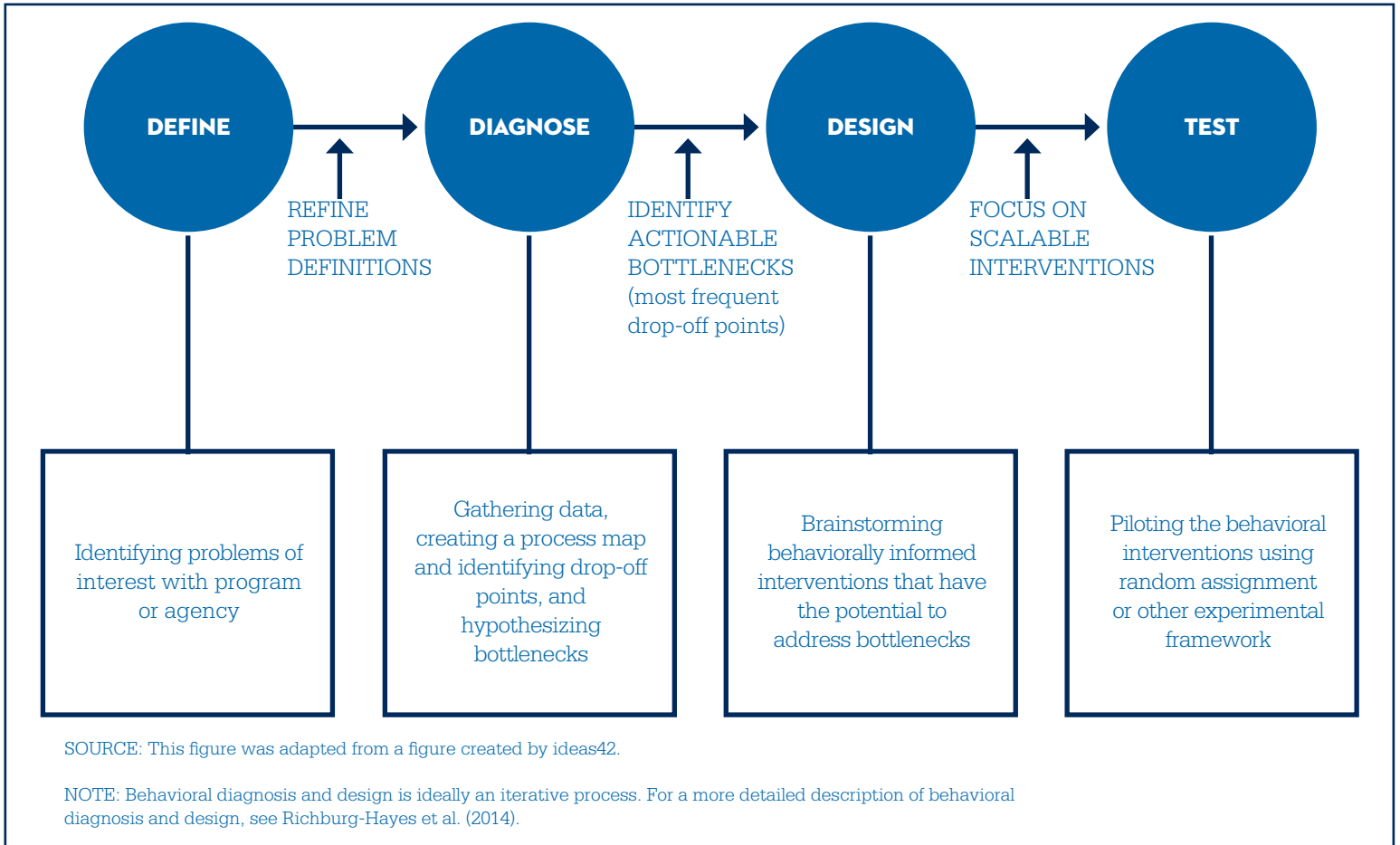
3 The process takes longer if the participant stops attending, either with good cause or in noncompliance.

4 Participants who had volunteered for GAIN had already developed a welfare-to-work plan and were considered reengaged if they were participating full time in activities. These individuals are not part of this study. Additionally, some exemptions do not require documentation (for example, those for individuals 60 years and older), though these exemptions applied to a small percentage of the group needing to be reengaged.

5 The amount of the sanction depends on the number of household members. When one household member is receiving aid, the grant is reduced from \$333 to \$0. When two household members are receiving aid, the grant is reduced by \$209. When there are 10 or more aided household members, the reduction is \$98.

6 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.

FIGURE 2
THE BEHAVIORAL DIAGNOSIS AND DESIGN PROCESS



eses 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 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 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. During the final or test phase, behavioral interventions are evaluated using rigorous scientific methods — ideally, randomized controlled trials.⁷ In January 2014, the BIAS project initiated this process in Los Angeles County.

Define

DPSS was interested in increasing the proportion of participants who attended their initial scheduled reengagement appointment. This increase would reduce staff burden resulting from having to reschedule appointments with participants. Additionally, the county assumed that participants who attended the initial appointment would reengage more quickly. An early review of data collected by DPSS revealed that many participants failed to attend the appointment, leading to noncompliance, which delayed the reengagement process. As a result, participants who did not attend risked being sanctioned, and DPSS was in danger of failing to meet the state’s December 2014 reengagement deadline.

As discussed above and shown in Figure 1, when participants did not attend their scheduled

⁷ 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 by many to be the most rigorous form of evaluation and the most accurate way to detect the impact of an intervention.

reengagement appointment, case managers initiated a lengthy follow-up process. The case managers attempted to contact participants, sent notices informing them of impending sanctions, conducted home visits, and required participants to complete a compliance plan. DPSS sanctioned participants who failed to take action and come into compliance.

Of participants who received a reengagement notice between September 2013 and January 2014, only about half attended the scheduled mandatory reengagement appointment. This outcome was consistent with the departmental average for attendance at appraisal appointments, but lower than DPSS would have liked given the short timeframe for reengaging the formerly exempt participants. Of these same participants, more than 60 percent ended up in noncompliance at one point during the reengagement process (by February 2014), and 15 percent were sanctioned. Only about 40 percent had been reengaged after two months.

Diagnose

To better understand where participants may have faced barriers to attending a reengagement appointment, the BIAS team conducted focus groups with staff to learn about their experiences with the reengagement process up to that point, reviewed documents and forms pertinent to the reengagement process in Los Angeles County, and reviewed the literature on TANF policies. While the team was unable to speak directly with clients due to county restrictions and timing constraints, the BIAS team identified several hypothesized bottlenecks through the behavioral mapping process. Figure 3 depicts the behavioral map and bottlenecks related to the reengagement process. Behavioral terms used throughout this report are in bold type the first time they appear and are defined in Appendix Table A.1.

Bottleneck 1: Materials are lengthy and complex.

The materials provided to participants explaining the reengagement process outlined a complicated and continually changing policy, and participants may have struggled to understand the new policy, especially those new to GAIN. For example, the 60-day notice mentions a new 24-month “time clock” within a state-imposed 48-month time limit for receiving cash assistance and new program rules, including fewer required hours of participation, different allowable activities, and new policies regarding stopping the clock. (The 60-day notice sent by DPSS can be found in Appendix Figure A.1.) The consequences of no action are buried on the third page. The dense and somewhat lengthy forms may create a high **cognitive load**, or demand on a person’s mental resources, and tax a participant’s **limited attention**.

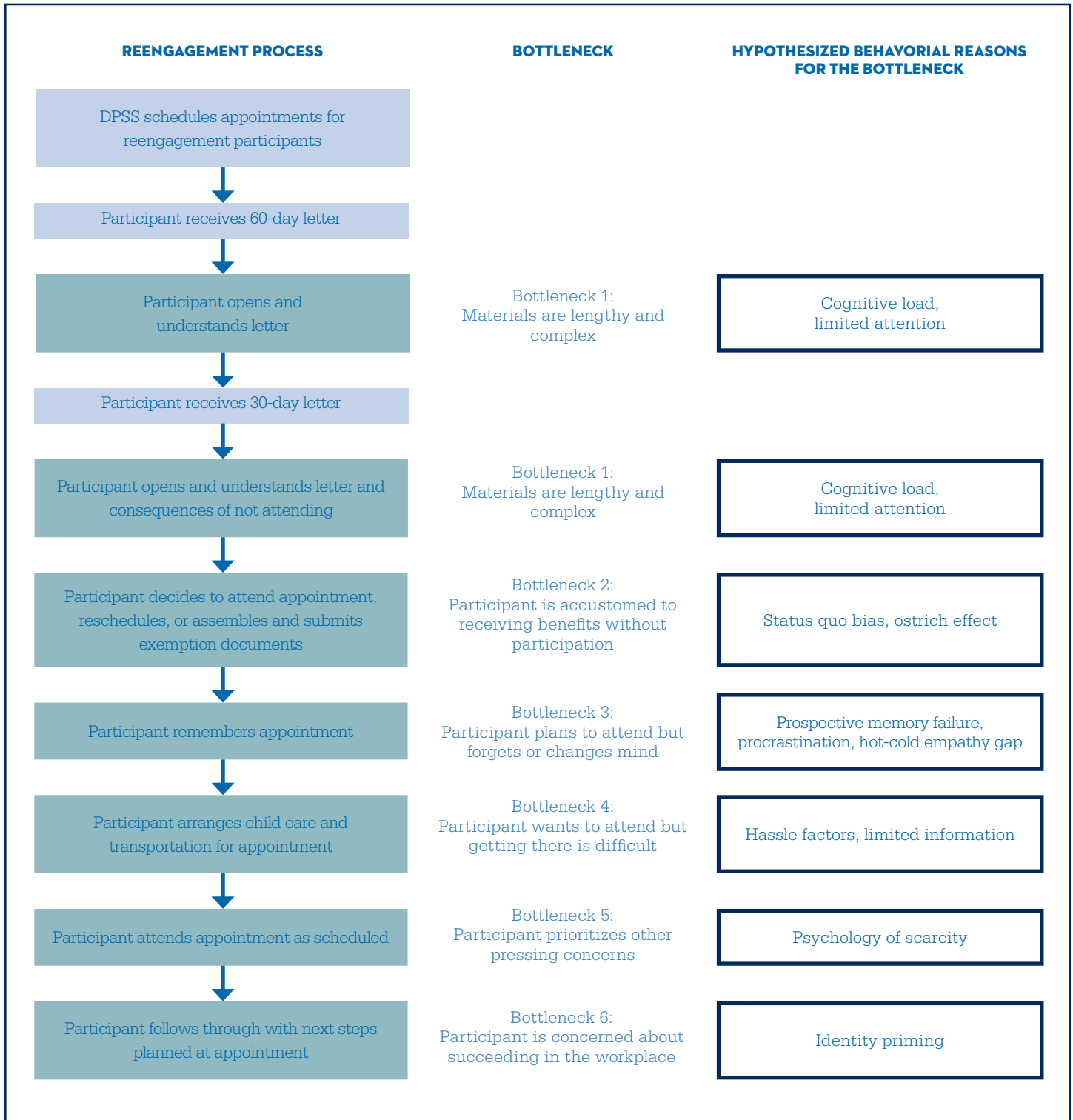
Bottleneck 2: Participant is accustomed to receiving benefits without participation.

Participants may have become accustomed to receiving their CalWORKs benefits while facing no mandate to participate in activities, creating a **status quo bias**, whereby people favor current circumstances simply because they are the norm. Interviews with staff suggested that many participants still believed they were exempt even though they had been sent reengagement notices, perhaps ignoring information they did not wish to know, such as the end to their exemption (**ostrich effect**).

Bottleneck 3: Participant plans to attend but forgets or changes mind.

Participants may have planned to attend the reengagement appointment, but forgot or changed their mind. Forgetting to perform an intended action at the right time, such as attending a scheduled meeting, is known as **prospective memory** failure. Staff noted that the reminder calls made three days prior to a scheduled appointment were often unsuccessful, as most parents did not answer the phone or the number was wrong. Additionally, participants may have at one time decided to attend the appointment, but **procrastinated** or changed their mind on the day of the appointment based on their current emotional state (**hot-cold empathy gap**).

FIGURE 3
REENGAGEMENT PROCESS: BEHAVIORAL MAP
LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES



Bottleneck 4: Participant wants to attend but getting there is difficult.

Participants may have wanted to attend the appointment, but found that getting to the meeting was difficult. The GAIN office may have been far from their homes, and Los Angeles has a limited public transportation system that may not have serviced participants' neighborhoods, making travel difficult if a car was unavailable. Additionally, the parents in the reengagement population by definition had young children, and organizing child care or other arrangements may have been difficult. These **hassle factors** may have prevented participants from attending a reengagement appointment at the scheduled time. DPSS offered reimbursements to participants for transportation and child care, but staff noted that few participants seemed to know about this option (**limited information**) and the upfront costs may have been difficult to finance.

Bottleneck 5: Participant prioritizes other pressing concerns.

Participants may have faced more pressing concerns — housing instability, unpaid utility bills, a car in need of repairs, a sick child, or physical or mental health issues — and attending a meeting at the welfare office was a lower priority. **Psychology of scarcity** encompasses the idea that poverty, and the ever-present concerns that come with it, may place a heavy burden on people's limited mental resources. Low-income individuals, such as those receiving CalWORKs benefits, who are often juggling personal, financial, health, and other life challenges, may struggle to attend the meeting — their mental attention focused elsewhere.

Bottleneck 6: Participant is concerned about succeeding in the workplace.

Participants may not have believed they could succeed in the workplace. The young child exemption that participants received primed their **identity** as parents, rather than as employees or students. Transitioning into a new role, or identity, as a worker may be difficult for some participants and lead them to skip the reengagement appointment. Staff noted that some parents had never had to participate in welfare-to-work activities and required more “hand holding” from case managers in order to succeed than those who had previously participated.

Design

State and county policy did not allow the BIAS team to alter the existing DPSS notices or amend the reengagement outreach process. Therefore, the team decided to create additional materials to send to participants with reengagement appointments. In light of the bottlenecks described above, the BIAS team hypothesized that mailing a **simplified**, more **salient** notice would increase the percentage of participants who attended the reengagement appointment. The notice also included a **personalized** sticky note from the case manager because research suggests that personalization can help make communications less generic and create a sense of **reciprocity**.⁸ The team designed two sets of notices and sticky notes that differed from each other in that one set emphasized the benefits participants might gain by attending the reengagement appointment and the other set emphasized the losses they might incur by failing to do so.

The team chose to test both a loss-framed message and a gain-framed message because behavioral research has shown that how information is presented can greatly affect decision making.⁹ For example, one study examined how **framing** incentives affected factory workers' productivity.¹⁰ Specifically, it examined differences in productivity between two groups of factory workers who were either offered bonuses as a reward for high productivity or had up-front bonuses taken away as a consequence of low productivity. The study found that both incentives increased productivity, but that the loss group's productivity exceeded that of the gain group, suggesting that people were **loss averse**, tending to care more about avoiding losses than acquiring gains. However, there is also evidence that gain-framed messages can be powerful tools in influencing behavior. A study of a smoking cessation program found that participants in a group that received video and text mes-

8 Garner (2005).

9 Kahneman and Tversky (1984).

10 Hossain and List (2009).

sages emphasizing the benefits of quitting (gains) had significantly higher levels of smoking abstinence than those in a group that received messages emphasizing the costs of continuing to smoke (losses).¹¹ When exploring framing techniques in new contexts, it may be useful to test both loss and gain strategies to see which ones works best, as there is evidence that both can be successful depending on the setting.¹²

Table 1 demonstrates how these intervention components connected to the hypothesized bottlenecks described earlier, with each intervention component corresponding to a column in Table 1. Appendix Figure A.2 highlights some of the key behavioral components in the new notices and sticky notes. The concepts are noted below.

- Both notices included simplified language and highlighted the most important information participants needed to know about the reengagement meeting in an effort to reduce participants' cognitive load and the effects of the limited attention they may have paid to the notices. Notices were printed in Spanish on the reverse side to increase comprehension.
- The notices also included an **implementation prompt**, in the form of checkboxes, to urge participants to plan their transportation and child care for the appointment. Encouraging participants to think ahead of time about these needs may have reduced the hassle factors potentially associated with getting to the meeting.
- The notices were personalized, referring to participants by their first names. They also included the name and contact information of the case manager whom the participant was scheduled to see.
- **Reframing** the message in the notices sought to either leverage loss aversion by reminding participants what they might lose if they did not attend the appointment or activate a more positive mindset by informing them what they stood to gain. The notices highlighted this information by using either a red box (loss message) or a green box (gain message), to draw the reader's eye to the message and make the notice more visually salient, and included the specific losses or gains that participants would experience in order to make the stakes of the meeting more tangible. All of these techniques aimed to combat the tendency to favor inactivity (status quo bias) and avoid information that requires action (ostrich effect).
- A sticky note with a personalized message to the participant from the case manager was attached to the notice. The sticky note aimed to address bottlenecks related to participants changing their minds or giving other concerns precedence by creating a sense of reciprocity and **social obligation** to attend the appointment. The sticky note also reiterated the loss or gain framing.

The Test

The pilot focused on 2,442 participants who were mandated to attend a reengagement appointment scheduled between July 2014 and September 2014. During each intervention month, participants with a scheduled reengagement appointment were randomly assigned to one of three groups:

1. Gain group, which received a gain-framed notice with sticky note
2. Loss group, which received a loss-framed notice with sticky note
3. Control group (status quo), which did not receive additional materials

DPSS mailed participants in the program groups a notice with a sticky note approximately one week before their scheduled appointments. Participants received these materials in addition to the status quo outreach. In general, participants would have received this letter after receiving the current 60-day and 30-day notices and shortly after receiving the automated reminder call. Participant outcomes were then tracked for three months after the scheduled appointment. Figure 4 presents a timeline of the outreach for the program and control groups.

11 Toll et al. (2007).

12 Rothman, Bartels, Wlaschin, and Salovey (2006).

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

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES

HYPOTHESIZED BOTTLENECK AND BEHAVIORAL CONCEPTS	INTERVENTION COMPONENTS ^a				
	Personalization	Framing	Simplification	Implementation Prompt	Reciprocity
THE MATERIALS PROVIDED TO PARTICIPANTS OUTLINED A COMPLICATED AND CONTINUALLY CHANGING POLICY, AND PARTICIPANTS MAY HAVE STRUGGLED TO UNDERSTAND THE NEW POLICY, ESPECIALLY THOSE NEW TO THE GAIN PROGRAM.					
Cognitive load			✓		
Limited attention			✓		
PARTICIPANTS HAD BECOME ACCUSTOMED TO RECEIVING THEIR CALWORKS BENEFITS WITHOUT ANY MANDATE TO PARTICIPATE IN ACTIVITIES. INTERVIEWS WITH STAFF SUGGESTED THAT MANY PARTICIPANTS STILL BELIEVED THEY WERE EXEMPT EVEN THOUGH THEY HAD BEEN SENT REENGAGEMENT NOTICES AND THAT MANY PARTICIPANTS DID NOT ACT UNTIL THEY WERE SANCTIONED.					
Status quo bias		✓			
Ostrich effect	✓	✓			
PARTICIPANTS MAY HAVE PLANNED TO ATTEND THE REENGAGEMENT MEETING, BUT FORGOT OR CHANGED THEIR MINDS.					
Prospective memory failure				✓	
Procrastination				✓	
Hot-cold empathy gap					✓
PARTICIPANTS MAY HAVE WANTED TO ATTEND, BUT GETTING TO THE MEETING WAS DIFFICULT.					
Limited information			✓		
Hassle factors				✓	
PARTICIPANTS MAY HAVE FACED MORE PRESSING CONCERNS – HOUSING PROBLEMS, UNPAID UTILITY BILLS, A CAR IN NEED OF REPAIRS, A SICK CHILD, OR PHYSICAL OR MENTAL HEALTH ISSUES – AND ATTENDING A MEETING AT THE WELFARE OFFICE WAS A LOWER PRIORITY.					
Psychology of scarcity	✓		✓	✓	
PARTICIPANTS MAY NOT BELIEVE THEY CAN SUCCEED IN THE WORKPLACE.					
Identity priming		✓			

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

^a The following are examples of intervention components in Los Angeles:

Personalization: Include personalized message from case manager on sticky note to make the letter less generic.

Framing: State what specifically participants will lose by not attending the appointment.

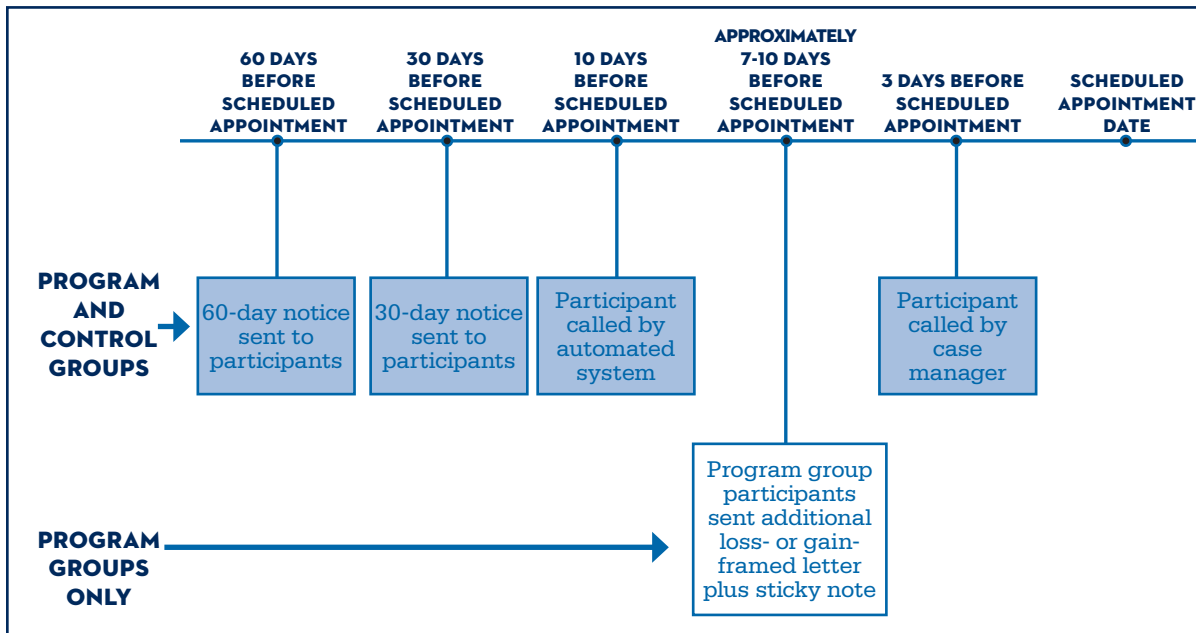
Simplification: Provide only key information that participants need to know to attend an appointment.

Implementation prompt: Use checkboxes to encourage participants to select their child care and transportation plans.

Reciprocity: Include personalized sticky note to create a sense that the case manager is counting on, and looking forward to, participants' attending.

FIGURE 4 OUTREACH TIMELINE

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES



Characteristics of the Sample

Appendix Table A.2 shows the composition of the sample by characteristic. Because the study used a random assignment design, each group should have similar characteristics at the outset of the study. Indeed, the analysis conducted shows no systematic differences among the three research groups.

Overall, participants were relatively young; the average age of sample members at the time of random assignment was 28, and about two-thirds had two or three children. Based on data available when DPSS staff scheduled the appointment, about 4 percent had a child under the age of 1. Another 51 percent were possibly eligible for the one-time young child exemption, though participants had to request this exemption since some may have wanted to save it for another time. (See Box 2.)

About 90 percent of the study participants spoke English, and 9 percent spoke Spanish. As explained earlier, the behavioral materials included both English and Spanish versions to increase comprehension. Almost all study participants were in one-parent households. Finally, most sample members had not been participating in GAIN work activities at the time DPSS contacted them; about 8 percent were participating, though they did not have enough hours to meet the participation requirements and thus were still required to attend the reengagement meeting. The study excluded individuals who were fully participating in GAIN and who were not required to attend the meeting.¹³

Outcomes

The original evaluation design intended to measure impacts on two proximal (short-term) outcomes to determine whether the intervention (1) increased the percentage of participants who attended the appointment, and (2) reduced the percentage of participants who entered noncompliance. Unfortunately, data were not available to measure these two outcomes.¹⁴

Instead, the BIAS team focused on two distal (longer-term) outcomes associated with attendance and noncompliance to determine whether the intervention (1) increased positive reengagement in the

¹³ Fully participating meant participating 20 hours per week for single parents with children under age 6, 30 hours per week for single parents with children over age 6, and 35 hours per week for two-parent families.

¹⁴ The data system tracks these outcomes, though a case file review found that the attendance data were incomplete and the noncompliance data were written over and could not be attributed to the reengagement meeting.

program, and (2) reduced sanctions. Positive engagement reflects actions taken to follow the program requirements, which could mean attending the reengagement appointment, leading to the signing of a welfare-to-work plan, providing evidence of qualifying for a different exemption, or attending the appointment and being referred and connected to specialized supportive services for substance abuse, mental health, domestic violence, or homelessness issues.¹⁵ DPSS sanctioned persons who failed to provide good cause for not attending the appointment and who failed to attend subsequent appointments.

Using a three-way random assignment design, the BIAS team could make three sets of comparisons. First, the team could compare outcomes between participants assigned to either behavioral group (loss or gain) and those in the control group. Second, it could compare outcomes between participants assigned to each behavioral group and those in the control group (loss versus control and gain versus control). Finally, it could directly compare outcomes between participants in the two behavioral groups (loss versus gain).

Specifically, the evaluation answers three key research questions:

1. What was the effect of receiving any behavioral messaging, compared with that of receiving no additional outreach, on positive engagement and sanctioning?
2. What was the effect of receiving loss messaging, compared with that of receiving no additional outreach, and the effect of receiving gain messaging, compared with that of receiving no additional outreach, on positive engagement and sanctioning?
3. What was the effect of behavioral messaging emphasizing loss, compared with that of behavioral messaging emphasizing gain, on positive engagement and sanctioning?

To answer each of these questions, the impact analysis measured the percentage of participants who were positively engaged at 30, 60, and 90 days after their scheduled appointments and the percentage of participants whom DPSS sanctioned at 60 and 90 days after their scheduled appointments. It is important to note that the second and third tests rely on smaller samples and had less power to detect the true effect than did the first test.

Findings

Key findings from the pilot include the following:

- **The intervention was implemented largely as designed.**

DPSS sent the appropriate outreach materials to the gain and loss groups. Two small issues arose. While the vast majority of program group materials were delivered, about 3 percent of the letters sent to the gain and loss groups were returned to DPSS with a “return to sender, no forwarding address” stamp. Additionally, the letter sent to the first cohort did not include the address of the GAIN office where the reengagement meeting was held (though this information was available from other letters sent previously). The address was included in the letters sent to the second and third cohorts of participants.

- **The additional behavioral outreach significantly increased the percentage of program group members who took action and became positively engaged 30 days after their scheduled appointment by 3.6 percentage points, a 14 percent increase. After 60 days, the control group caught up to the program groups.**

As Table 2 shows, 30 days after the scheduled appointment date, the additional behavioral outreach increased positive engagement from 25.6 percent to 29.2 percent, a statistically significant difference. There was no statistically significant difference after 60 days. Thus, the behavioral materials encouraged some participants to attend the appointment or provide evidence of an exemption earlier than they would have without the additional notice.

¹⁵ It was unnecessary for participants to attend the appointment if DPSS had evidence that they were receiving specialized supportive services to address these issues.

**TABLE 2
REENGAGEMENT OUTCOMES**

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES

OUTCOME	PROGRAM GROUP	CONTROL GROUP	DIFFERENCE	P-VALUE
POOLED GAIN/LOSS VS. CONTROL				
Positively engaged (%)				
at 30 days after scheduled appointment	29.2	25.6	3.6*	0.058
at 60 days after scheduled appointment	40.4	39.5	0.9	0.669
at 90 days after scheduled appointment	47.1	47.6	-0.4	0.837
Sanctioned (%)				
at 60 days after scheduled appointment	8.6	9.4	-0.8	0.508
at 90 days after scheduled appointment	12.9	13.3	-0.4	0.774
<i>Sample size (total = 2,442)</i>	<i>1,628</i>	<i>814</i>		
GAIN VS. CONTROL				
Positively engaged (%)				
at 30 days after scheduled appointment	28.4	25.6	2.9	0.192
at 60 days after scheduled appointment	39.3	39.5	-0.2	0.937
at 90 days after scheduled appointment	46.8	47.6	-0.8	0.758
Sanctioned (%)				
at 60 days after scheduled appointment	8.5	9.4	-0.9	0.523
at 90 days after scheduled appointment	12.9	13.3	-0.5	0.775
<i>Sample size (total = 1,628)</i>	<i>814</i>	<i>814</i>		
LOSS VS. CONTROL				
Positively engaged (%)				
at 30 days after scheduled appointment	29.9	25.6	4.4**	0.048
at 60 days after scheduled appointment	41.4	39.5	2.0	0.413
at 90 days after scheduled appointment	47.4	47.6	-0.1	0.962
Sanctioned (%)				
at 60 days after scheduled appointment	8.7	9.4	-0.7	0.611
at 90 days after scheduled appointment	13.0	13.3	-0.4	0.834
<i>Sample size (total = 1,628)</i>	<i>814</i>	<i>814</i>		

(continued)

TABLE 2 (CONTINUED)

OUTCOME	LOSS GROUP	GAIN GROUP	DIFFERENCE	P-VALUE
GAIN VS. LOSS				
Positively engaged (%)				
at 30 days after scheduled appointment	29.9	28.4	1.5	0.500
at 60 days after scheduled appointment	41.4	39.3	2.2	0.369
at 90 days after scheduled appointment	47.4	46.8	0.6	0.795
Sanctioned (%)				
at 60 days after scheduled appointment	8.7	8.5	0.2	0.896
at 90 days after scheduled appointment	13.0	12.9	0.1	0.939
<i>Sample size (total = 1,628)</i>	<i>814</i>	<i>814</i>		

SOURCE: MDRC calculations based on data from the Los Angeles Department of Public Social Services.

NOTES: Estimates were regression adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members.

Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in differences.

Figure 5 depicts this outcome. While the proportion of the pooled program group that is positively engaged is higher than the control group for much of the follow-up period before day 60, the difference between the two groups over the entire period is not statistically significant.¹⁶

- **The behavioral outreach did not significantly reduce the percentage of participants who were sanctioned.**

The impacts are shown after 60 and 90 days following the scheduled appointment because it is unlikely someone would be sanctioned at 30 days, given the many steps involved in sanctioning an individual for noncompliance. As Figure 1 shows, after a person becomes noncompliant, the staff sends a notice, schedules a compliance determination meeting and a home visit, and, for those who do not attend the meeting and complete a compliance plan, may conduct the home visit — a process that can take months. After 90 days, DPSS had sanctioned about 13 percent of participants across all groups for noncompliance.

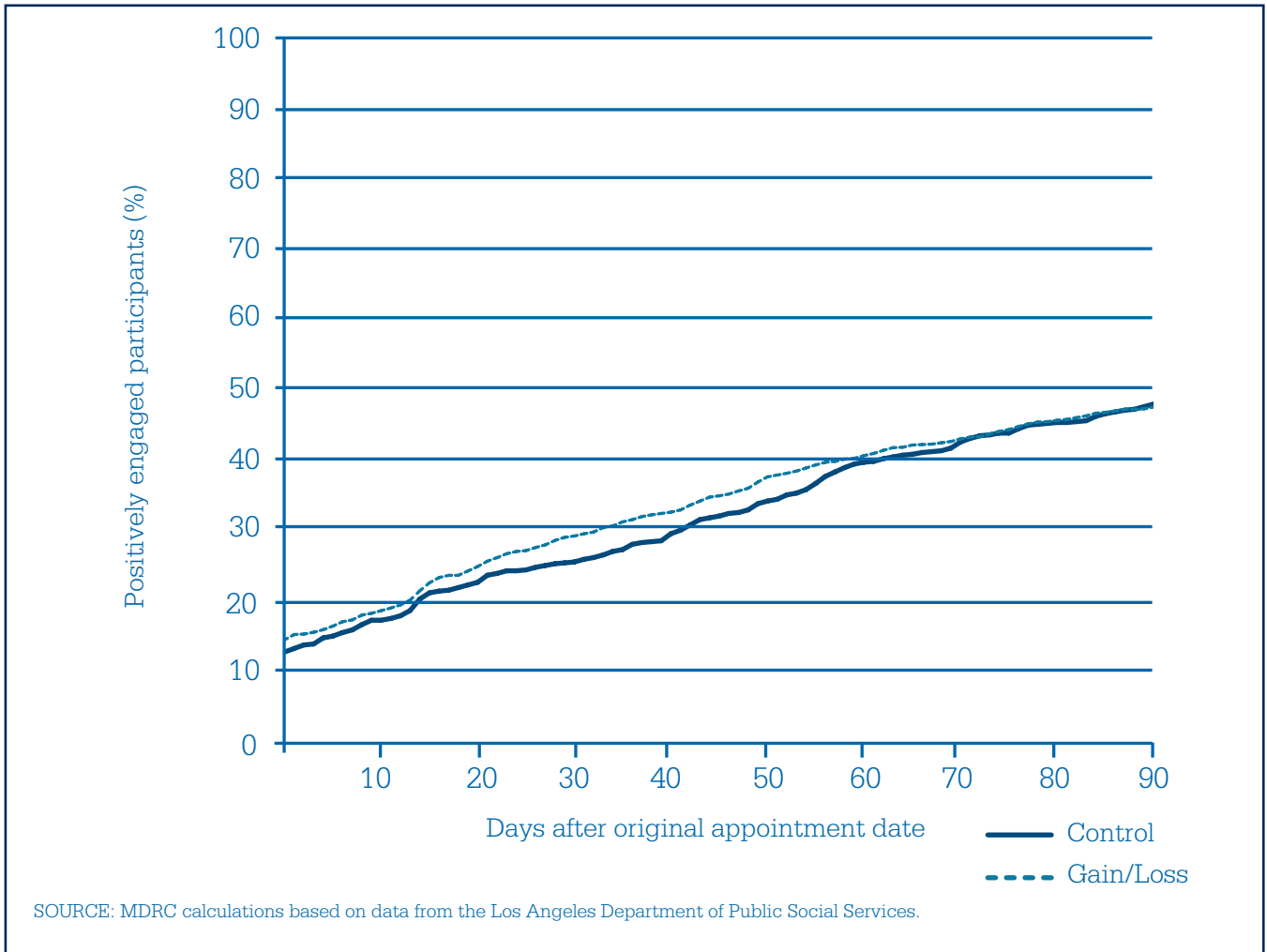
- **The loss notice, when compared with no additional outreach, significantly increased positive engagement at 30 days by 4.4 percentage points, a 17 percent increase. The gain notice, when compared with no additional outreach, did not produce a statistically significant impact at 30 days. No impacts were found after 60 and 90 days.**

The findings suggest that the loss message led to quicker reengagement. When the loss and gain groups are compared directly, no statistically significant differences can be detected. That is, the analysis does not provide clear evidence that the loss message was more effective than the gain message. However, because the loss outreach increased short-term reengagement and the same cannot be said of the gain outreach, it appears that participants responded more to the threat of losing existing benefits than the promise of receiving new benefits.

- **There is little evidence that impacts from the behavioral outreach differed for adults with more or less experience with the GAIN program or for adults with younger or older children.**

¹⁶ Though not shown on the graph, about 8.7 percent of the gain and loss groups and 9.0 percent of the control group were positively engaged prior to the original appointment date. Some participants may have contacted their case managers when they received one of the earlier notices and submitted the required documentation for another exemption or met with their case managers prior to the originally scheduled appointment and signed a welfare-to-work plan.

FIGURE 5
ENGAGEMENT OVER TIME, BY RESEARCH GROUP
LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES



It is possible that the behavioral outreach could have been more or less successful for certain subgroups of the sample. For example, those with prior experience with the GAIN program might have more readily understood the earlier outreach sent by DPSS, been more familiar with how to get to the GAIN office, and generally known whom to call if they had questions. As a result, the team hypothesized that the behavioral outreach would be more effective with the less experienced group, because the extra outreach would provide the less experienced group with new information. The subgroup analysis presented in Table 3 does not support this hypothesis.¹⁷ In addition, while the 3.8 percentage point increase in positive engagement within 30 days for those with more GAIN experience is statistically significant, it is indistinguishable from the 3.1 percentage point increase for those with less GAIN experience.

The BIAS team also examined whether the behavioral outreach differed by age of the youngest child. As Table 4 shows, participants with children under the age of 2 were eligible for the one-time young child exemption and thus may have reengaged more easily. Indeed, participants with younger children had higher rates of positive engagement, compared with those with older children, though the behavioral outreach did not significantly increase engagement for one group over the other.¹⁸ While the outreach appears to have

17 The BIAS team estimated GAIN experience to equal the number of months on the 48-month CalWORKs time clock plus the months not counted due to sanction.

18 The impact estimates were different enough between the two groups that the intervention appears to have reduced positive engagement within 90 days of the scheduled appointment more among families with children under age 2 than among other families. However, there is a great deal of uncertainty in how much the intervention affected positive engagement for either group.

TABLE 3
REENGAGEMENT OUTCOMES: POOLED GAIN/LOSS VS. CONTROL,
SUBGROUP: EXPERIENCE WITH GAIN

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES

OUTCOME	GAIN/LOSS GROUP	CONTROL GROUP	DIFFERENCE	P-VALUE	SUBGROUP DIFFERENCE
12 OR LESS MONTHS IN GAIN					
Positively engaged (%)					
at 30 days after scheduled appointment	31.5	28.4	3.1	0.418	
at 60 days after scheduled appointment	44.7	40.4	4.3	0.298	
at 90 days after scheduled appointment	53.0	49.7	3.3	0.421	
Sanctioned (%)					
at 60 days after scheduled appointment	5.0	7.0	-2.0	0.302	
at 90 days after scheduled appointment	8.5	12.0	-3.5	0.157	
<i>Sample size (total = 638)</i>	422	216			
MORE THAN 12 MONTHS IN GAIN					
Positively engaged (%)					
at 30 days after scheduled appointment	28.4	24.6	3.8*	0.087	
at 60 days after scheduled appointment	38.8	39.1	-0.3	0.887	
at 90 days after scheduled appointment	45.0	46.8	-1.8	0.462	
Sanctioned (%)					
at 60 days after scheduled appointment	9.9	10.2	-0.4	0.794	
at 90 days after scheduled appointment	14.5	13.8	0.7	0.692	
<i>Sample size (total = 1,804)</i>	1,206	598			

SOURCE: MDRC calculations based on data from the Los Angeles Department of Public Social Services.

NOTES: Estimates were regression adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members.

Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic is used to assess whether the difference in impacts between sites or subgroups is statistically significant. Statistical significance levels are indicated as follows: † = 10 percent; †† = 5 percent; ††† = 1 percent.

Rounding may cause slight discrepancies in differences.

Experience in GAIN is defined as the sum of months on the 48-month time clock and months not counted toward the clock due to sanction.

reduced sanctioning at 60 days for the subgroup with children under the age of 2 and increased positive engagement at 30 days for the subgroup with older children, the difference in impacts between the two subgroups is not statistically significant, and therefore these findings should be treated with caution.

- **The additional behavioral outreach was a low-cost intervention; it cost DPSS less than \$2.00 per person.**

A key tenet of the BIAS project is to implement small behavioral changes at a relatively low cost. The cost analysis presented in Table 5 shows that this pilot was a low-cost intervention. The cost of staff time spent preparing the letters and sticky notes contributed most to the total cost. If a county were to replicate this type

TABLE 4
REENGAGEMENT OUTCOMES: POOLED GAIN/LOSS VS. CONTROL,
SUBGROUP: AGE OF YOUNGEST CHILD

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES

OUTCOME	GAIN/LOSS GROUP	CONTROL GROUP	DIFFERENCE	P-VALUE	SUBGROUP DIFFERENCE
0-1 YEARS					
Positively engaged (%)					
at 30 days after scheduled appointment	41.0	39.2	1.7	0.721	
at 60 days after scheduled appointment	51.0	55.5	-4.5	0.360	
at 90 days after scheduled appointment	57.3	65.2	-7.9	0.104	†
Sanctioned (%)					
at 60 days after scheduled appointment	5.0	9.0	-4.0*	0.097	
at 90 days after scheduled appointment	7.4	10.8	-3.4	0.224	
<i>Sample size (total = 441)</i>	<i>287</i>	<i>154</i>			
2+ YEARS					
Positively engaged (%)					
at 30 days after scheduled appointment	26.6	22.5	4.2**	0.045	
at 60 days after scheduled appointment	38.0	35.9	2.1	0.357	
at 90 days after scheduled appointment	44.9	43.6	1.3	0.586	†
Sanctioned (%)					
at 60 days after scheduled appointment	9.4	9.4	0.0	0.997	
at 90 days after scheduled appointment	14.2	13.8	0.3	0.842	
<i>Sample size (total = 2,000)</i>	<i>1,341</i>	<i>659</i>			

SOURCE: MDRC calculations based on data from the Los Angeles Department of Public Social Services.

NOTES: Estimates were regression adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members.

Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic is used to assess whether the difference in impacts between sites or subgroups is statistically significant. Statistical significance levels are indicated as follows: † = 10 percent; †† = 5 percent; ††† = 1 percent.

Rounding may cause slight discrepancies in differences.

of intervention on a larger scale, it would presumably automate some of these functions, which could lower the cost even more.

Note that these cost estimates do not include the research-related costs or the time DPSS staff spent helping develop and design the intervention.

Discussion

The behavioral strategy tested was a low-cost, light-touch intervention. This intervention was implemented on top of an intensive campaign to increase engagement among the population. Given that the program ma-

TABLE 5
DIRECT INTERVENTION COST PER PROGRAM GROUP MEMBER
LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES

INTERVENTION COMPONENT	PROGRAM COST (\$)
Paper/Printing	
Color printing	244
Paper	24
Envelope	26
Sticky note	117
Postage	781
Staff time	1,728
Total cost (for entire program)	2,920
Direct cost per group member	1.79
<i>Sample size (total = 1,804)</i>	1,628

SOURCE: Costs were estimated from Amazon.com, rippedsheets.com, Bureau of Labor Statistics data, and hour estimates from Los Angeles Department of Public Social Services.

materials were additional pieces of mail on top of at least four other attempts to reach participants and convey the importance of participating, it is notable that they helped participants to positively engage within one month of their scheduled appointment. Individuals who responded to the outreach responded sooner, though the effects did not continue past 30 days.

It makes sense that the behavioral outreach did not have longer-term effects on participants. As Figure 1 shows, when participants failed to attend the initial reengagement meeting, county staff pursued other avenues to engage them, including sending noncompliance letters and conducting home visits. Thus, the behavioral letter may not have resonated with participants later, when the other outreach attempts had gained traction.

While the intervention did not have effects that extended past 30 days, it may have been cost-effective. The behavioral outreach increased the percentage of parents who came into compliance within 30 days rather than within 60 days, which translates into savings of staff time spent conducting additional outreach to this group, including possible home visits. If the costs of the staff time saved because of the intervention outweighed the costs of preparing and sending the mailings, then this type of intervention may still be justified in the future, even though the impacts were small.

The lack of statistically significant findings on sanctions may reflect the length of time it takes for DPSS to offer participants opportunities to come into compliance and finally impose sanctions once they miss the initial appointments.

As discussed above, due to the lack of available data, the research team was unable to determine whether this type of intervention had an impact on the more proximal outcomes of attending the appointment and entering noncompliance, which are the respective precursors to the measured outcomes of positive engagement and being sanctioned. It is possible that the intervention had larger impacts on attendance at the initial scheduled appointment, but that other bottlenecks arose between the initial appointment and positive engagement, as measured later.

Challenges in Conducting the Test

The pilot encountered challenges that are typical to implementing a change to a process in real time. In this study, state policies dictated some processes, and counties could not deviate from them. For example, the

state developed the notices that counties had to send to parents prior to their scheduled appointment and sent counties detailed instructions they had to follow, including the required steps to engage participants.¹⁹

The BIAS team encountered additional challenges because of timing constraints. DPSS had already begun sending out appointment notices by the time the BIAS team got involved, and there was no time to do a full diagnosis, including speaking with participants to get their perspective. Conversations with participants could have led to the identification of additional bottlenecks, which could have been addressed.

Areas for Future Research

The work on this pilot suggests a few areas for further research:

- Would the behavioral outreach have been more effective if it replaced the state-mandated outreach? As noted above, the BIAS team could not replace the state-mandated outreach with a simple message emphasizing a few points that resonate most with participants. Instead, the team had to conduct the outreach on top of the status quo outreach, which may have added to the cognitive load.
- Would different types of outreach, such as text messaging and social media, be more effective than mailed letters and telephone calls in engaging welfare-to-work participants? DPSS is gathering more cell phone numbers, and the use of smartphones has become more prevalent in low-income communities.²⁰ It may be effective to use means of outreach other than letters and phone calls in the future.
- Is it better to emphasize losses or gains to engage participants? Social service agencies have been using both messages, depending on the program and philosophy of the agency. While this test found a loss message might be more effective than a gain message in encouraging participants to engage in activities, further research should be conducted with larger samples in different contexts to confirm this result.

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 the low-cost, iterative nature of rapid-cycle experimentation. In addition to the Los Angeles TANF research and work covered in earlier reports (see the list of previously published research at the back of this report), the BIAS project has completed evaluations with other partners, including the Indiana Office of Early Childhood and Out-of-School Learning and the Washington State Division of Child Support. Results from these evaluations will be published as they become available to further inform this rapidly developing field.

19 California Department of Social Services (2013).

20 According to a recent study conducted by Pew Research, 50 percent of adults earning less than \$30,000 a year own a smartphone. See Smith (2015).

APPENDIX



APPENDIX FIGURE A.1 STATUS QUO 60-DAY NOTICE

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES

STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY

YOUNG CHILD EXEMPTION ENDS DECEMBER 31, 2012 NEW RULES FOR CalWORKs WELFARE-TO-WORK ACTIVITIES

Complex and lengthy three-page letter; cognitive load and limited attention

Starting January 1, 2013, if you did not have to do CalWORKs activities because you were caring for a young child(ren) you will now have to do these activities. You do not have to participate in an activity until your county worker contacts you.

Your county worker will contact you after January 1, 2013, to help you start activities that will help you get a job. While you were exempt no time was counted against your CalWORKs 48-month time limit. Until your county worker has talked to you about participating in an activity(ies) and you have signed a Welfare-to-Work (WTW) plan that includes necessary supportive services, time will not be counted toward the CalWORKs 48-month time limit.

Participants may not believe they can succeed in the workplace; identity priming

For reasons (exemptions) you do not have to participate in WTW activities. You may be exempt because of your own disability or taking care of a sick household member. If you are 23 months or younger, you can choose to use a new exemption. **or if you think you qualify for another exemption.**

Participants may be accustomed to being exempt and avoid taking action until sanction; status quo bias and ostrich effect

There are new rules for WTW activities. Everyone will have more WTW activity options; most families have fewer hours of required participation. You are not required to participate **until** you are contacted by your county worker. Your county worker will contact you before December 31, 2014.

The new rules do not change your CalWORKs 48-month time limit or your cash aid amount, but the WTW rules to stay on aid have changed.

Summary of New WTW Rules

- Starting January 1, 2013, there is a new **WTW 24-Month Time Clock** (within the 48-month time limit).
- For most families, there are fewer required hours of participation.
- You will have more choices of activities you can participate in during the WTW 24-Month Time Clock period. At the end of the WTW 24-Month Time Clock period, you will have fewer choices of activities.
- There are times when your WTW 24-Month Time Clock may stop. Months when your clock is stopped will not count towards your WTW 24-Month Time Clock.
- Your WTW 24-Month Time Clock does not start until your county worker contacts you about your new activity and you have signed a WTW plan that includes necessary supportive services.

Hours of Participation

For most families, there are fewer required hours of participation:

Number of Adults in the Family (Assistance Unit)	Prior to January 1, 2013 Weekly Hours of Participation	Starting January 1, 2013 Weekly Hours of Participation
Single-adult with a child under 6 years old	32	20
Single-adult with no children under 6 years old	32	30
Two-parent families	35	35

APPENDIX FIGURE A.1 (CONTINUED)

More Choices in WTW Activities

- You will have more choices of activities you can participate in during the WTW 24-Month Time Clock period. These activities include: work, education, training, and mental health, substance abuse, and/or domestic abuse services. There are no more “core” activities.
- **There is still a 48-month time limit on CalWORKs, but the WTW rules to stay on aid have changed.** If you have less than 24 months left on your 48-month time limit, you will have more choices of activities for the rest of your time on aid.
- The county must help in paying for child care, transportation, and/or other related expenses (supportive services) if you **need** them to participate in any approved WTW appointment or activity.

Your WTW 24-Month Time Clock Stops When:

- You are in appraisal, job search, assessment, or in the process of developing a new WTW plan.
- You are meeting the required number of participation hours in certain activities. Your county worker will explain this more to you at your next contact.
- You are in Cal-Learn.
- You are exempt from participating.
- The county determines that you have a good reason for not participating.
- You are sanctioned.

Making arrangements to attend the meeting may be difficult; hassle factors

County of Los Angeles

Department of Public Social Services

Do you have questions? Call your GAIN Services Worker or

(877) 292-GAIN/(877) 292-4246.

If I already have a WTW plan because I am volunteering, can I still use this plan?

- You may still use this plan while you are volunteering. You will have to sign a new WTW plan when your worker contacts you. You will have the option to change your plan activities but you may not need to. When your county worker contacts you he/she will discuss the new rules with you and give you a chance to change your plan at that time if you like.
- You may continue to volunteer until your county worker contacts you. You will continue to receive the same level of supportive services. As a reminder, you will receive supportive services only for activities in your approved plan.
- If you do not do your activities you have agreed to in your volunteer plan your supportive services may change.

APPENDIX FIGURE A.1 (CONTINUED)

What if my aid was cut (because of a sanction) before I became exempt?

- If your aid was lowered for not participating (called a 'sanction'), your sanction ended when you became exempt.

What if I do not do what my county worker asks me to do?

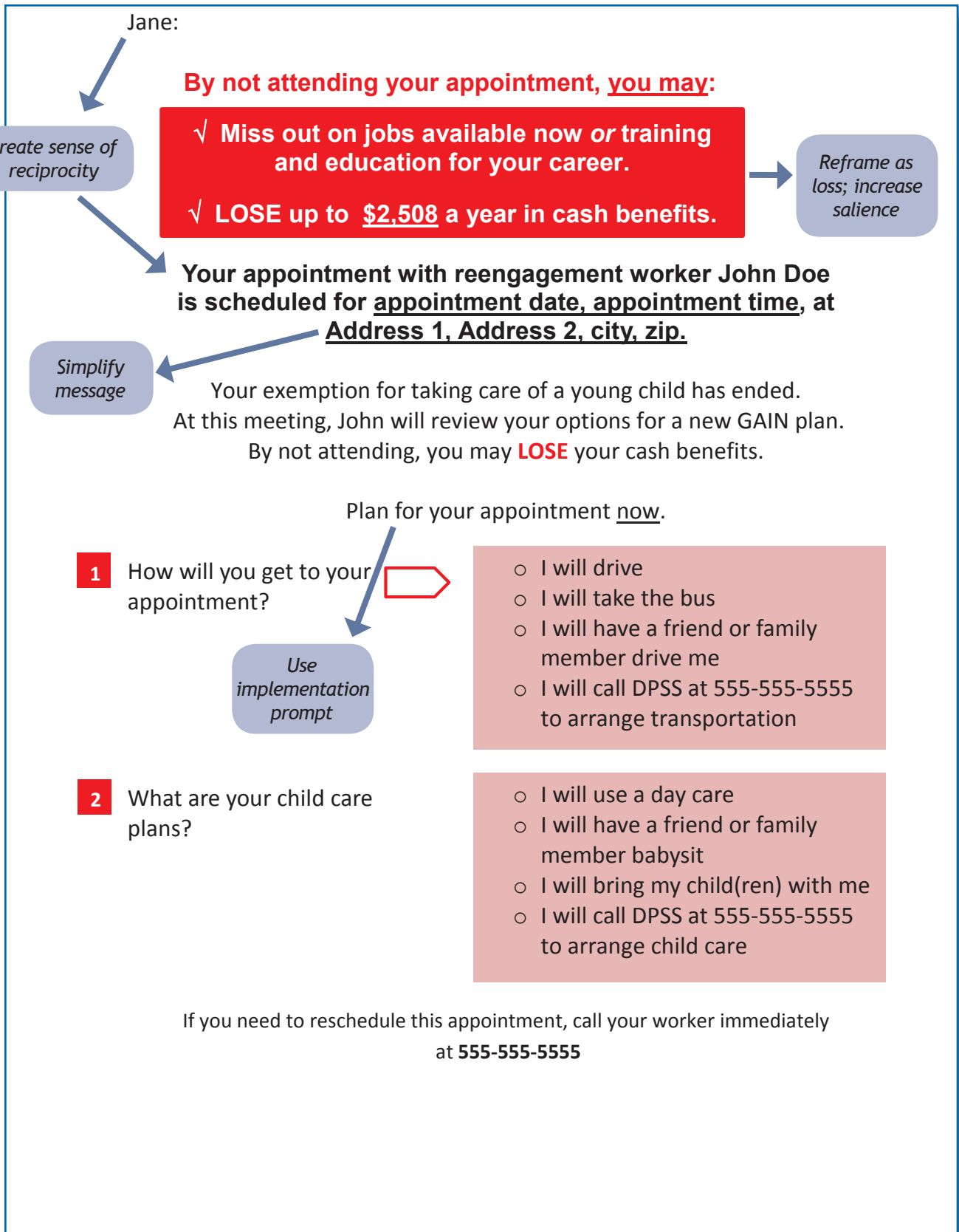
- If you do not do what your county worker asks you to do, such as attend an appointment, you may be sanctioned. If you are sanctioned, your cash aid will be lowered and it may affect your supportive services.

What happens when my WTW 24-Month Time Clock runs out?

- When your WTW 24-Month Time Clock runs out, you will have a shorter list of activities to choose to participate in to continue receiving the same amount of cash aid.
 - o The shorter list may include employment, work experience, and community service.
 - o Vocational education and training may also be allowed for up to one year after your WTW 24-Month Time Clock ends.
- Your county worker will explain more about this shorter list of activities to you before your WTW 24-Month Time Clock runs out.
- Your county will send you a notice before you reach the end of your WTW 24-Month Time Clock. They will provide you with the shorter list of activities to choose from, and instructions on what you will need to do next in order to continue receiving the same level of cash aid.
- **Once your WTW 24-Month Time Clock ends, if you do not meet your new participation requirements, your cash aid may be lowered and it may affect your supportive services.**
- There are reasons that can give you more time (an extension) on your WTW 24-Month Time Clock. Your county will send you more information about these reasons before your WTW 24-Month Time Clock runs out.

APPENDIX FIGURE A.2 PROGRAM GROUP MATERIALS

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES



(continued)

APPENDIX FIGURE A.2 (CONTINUED)

County of Los Angeles

Department of Public Social Services

Jane:

By attending your appointment, you may:

- ✓ Take advantage of jobs available now or training and education for your career.
- ✓ KEEP up to \$2,508 a year in cash benefits.

Your appointment with reengagement worker John Doe is scheduled for appointment date, appointment time at Address 1, Address 2, City, Zip.

Your exemption for taking care of a young child has ended. At this meeting, John will review your options for a new GAIN plan. By attending, you may **KEEP** your cash benefits.

Plan for your appointment now.

1 How will you get to your appointment?



- I will drive
- I will take the bus
- I will have a friend or family member drive me
- I will call DPSS at 555-555-5555 to arrange transportation

2 What are your child care plans?



- I will use a day care
- I will have a friend or family member babysit
- I will bring my child(ren) with me
- I will call DPSS at 555-555-5555 to arrange child care

If you need to reschedule this appointment, call your worker immediately at **555-555-5555**).

(continued)

APPENDIX FIGURE A.2 (CONTINUED)

Program group materials: loss- and gain-framed sticky-notes

Loss:

Personalize

Hi Jane,
See you at your appointment next week. We'll make a plan for work, and make sure you don't lose your cash benefits. Call me if you have any questions.
See you then,
John Doe
555-555-5555

Reframe as loss

Create sense of reciprocity

Gain:

Hi Jane,
See you at your appointment next week. We'll make a plan for work, and make sure you continue to receive cash benefits. Call me if you have any questions.
See you then,
John Doe
555-555-5555

Reframe as gain

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)
Framing	The way in which information is presented. Every piece of information can be presented in different ways, and small changes in the wording of a message or a choice can drastically change the way it is perceived and the choices that people make with regard to it. Information is never evaluated in a neutral or impartial way, because every way of presenting information is a frame that leads people in one direction or another.	Kahneman (2011)
Hassle factors	A feature or situational detail that makes a behavior harder to accomplish. This could be, for example, a small barrier to completing a task, such as filling out a form or waiting in line. While these factors may seem trivial and are often neglected in program design, reducing or eliminating them can have an outsized impact on outcomes.	Bertrand, Mullainathan, and Shafir (2004)
Hot-cold empathy gap	The notion that people have difficulty predicting what they will want and how they will behave in affective states that are different from their current state. The idea is that human understanding is dependent on the current emotional state. For example, when one is happy, it is difficult to understand what it is like for one to be angry, and vice versa.	Loewenstein (2005)
Identity priming	This occurs when one identity (for example, being a mother) influences a response to a stimulus. Decisions and actions differ depending on which identity is active, and identities can become active because of small changes in the environment. For example, priming someone's identity as a good student could boost performance on an exam.	Benjamin, Choi, and Strickland (2010)
Implementation prompt	Ways to assist people in plan making, or forming implementation intentions, which can facilitate the fulfillment of goals.	Milkman, Beshears, Choi, Laibson, and Madrian (2011)
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)
Limited information	The brain can process a restricted amount of information at any given time. A person has a limited rate of information processing and can only pay attention to a certain amount.	Datta and Mullainathan (2012)
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 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. When program designers rely on loss aversion, for example, 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)

(continued)

APPENDIX TABLE A.1 (CONTINUED)

TERM	DEFINITION	EXAMPLE TEXT
Personalization	Techniques designed to make communication less generic.	Service et al. (2014)
Procrastination	The practice of carrying out less urgent tasks in preference to more urgent ones, or doing more pleasurable things in place of less pleasurable ones, and thus putting off impending tasks to a later time, sometimes to the “last minute” before the deadline.	Akerlof (1991)
Prospective memory	Remembering to perform a planned action or intention at the appropriate time.	Brandimonte, Einstein, and McDaniel (1996)
Psychology of scarcity	The pressure of negotiating life under conditions of poverty, which exacts a particularly high toll on cognitive resources.	Shafir and Mullainathan (2012)
Reciprocity (social obligation)	The psychological phenomenon of people’s (un)kind reactions toward (un)kind actions in the absence of reputational concerns.	Camerer, Loewenstein, and Rabin (2011)
Reframing	Changing the way in which information is presented. Every piece of information can be presented in different ways, and small changes in the wording of a message or a choice can drastically change the way it is perceived and the choices that people make with regard to it. Information is never evaluated in a neutral or impartial way, because every way of presenting information is a frame that leads people in one direction or another.	Kahneman (2011)
Salience	The degree to which a stimulus attracts and retains a person’s attention.	Kahneman (2003)
Simplification	To reduce in complexity or make easier to understand.	Service et al. (2014)
Status quo bias	The current state of the world dominates our decision making. It is hard to imagine that the world will be different tomorrow, or five minutes from now, and we often prefer an outcome simply because it is the status quo.	Kahneman, Knetsch, and Thaler (1991)

APPENDIX TABLE A.2 BASELINE CHARACTERISTICS

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC SOCIAL SERVICES

OUTCOME	GAIN GROUP	LOSS GROUP	CONTROL GROUP
Language (%)			
English	89.6	89.6	90.4
Spanish	9.8	9.3	9.2
Other	0.6	1.1	0.4
Participation type (%)			
Not participating	91.9	92.4	91.0
Partially participating	8.1	7.6	9.0
One parent household (%)			
One parent household (%)	97.8	98.3	98.2
Number of children (%)			
1	15.8	17.8	14.6
2	37.1	38.3	39.6
3	25.9	25.3	25.3
4	13.4	12.0	12.0
5+	7.7	6.5	8.5
Age of participant (years)			
Age of participant (years)	27.9	27.4	27.8
Age of youngest child (years)			
Age of youngest child (years)	2.6	2.5	2.5
Age of youngest child (%)			
Less than 1 year	3.9	4.3	3.4
1-2 years	47.3	46.9	48.7
More than 2 years	48.8	48.8	47.8
<i>Sample size (total=2,442)</i>	<i>814</i>	<i>814</i>	<i>814</i>

SOURCE: MDRC calculations based on data from the Los Angeles Department of Public Social Services.

NOTES: Distributions may not sum to 100 percent due to rounding.

To assess differences across research groups, an omnibus F-test was conducted. The omnibus F-test that was applied to evaluate the joint significance of the individual characteristics showed no systematic differences between the three research groups.

REFERENCES

- Akerlof, George A. 1991. "Procrastination and Obedience." *The American Economic Review*. 1991. 81, 2: 1-19.
- Baird, Peter, Dan Cullinan, Patrick Landers, and Leigh Reardon. 2016. *Nudges for Child Support: Applying Behavioral Insights to Increase Collections*. 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.
- Benjamin, Daniel J., James J. Choi, and A. Joshua Strickland. 2010. "Social Identity and Preferences." *The American Economic Review* 100, 4: 1913-1928.
- Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir. 2004. "A Behavioral-Economics View of Poverty." *The American Economic Review* 94, 2: 419-423.
- Brandimonte, Maria E., Gilles O. Einstein, and Mark A. McDaniel. 1996. *Prospective Memory: Theory and Applications*. New York: Lawrence Erlbaum Associates Publishers.
- Camerer, Colin F., George Loewenstein, and Matthew Rabin, eds. 2011. *Advances in Behavioral Economics*. Princeton, New Jersey: Princeton University Press.
- Datta, Saugato, and Sendhil Mullainathan. 2012. "Behavioral Design: A New Approach to Development Policy." CGD Policy Paper 016. Washington, DC: Center for Global Development.
- Fryer, Roland G., Jr., Steven Levitt, John List, and Sally Sadoff. 2012. "Enhancing the Efficacy of Teacher Incentives Through Loss Aversion: A Field Experiment." NBER Working Paper No. 18237. Cambridge, MA: National Bureau of Economic Research.
- Garner, Randy. 2005. "Post-it Note Persuasion: A Sticky Influence." *Journal of Consumer Psychology* 15, 3: 230-237
- Hossain, Tanjim, and John A. List. 2009. "The Behavioralist Visits the Factory: Increasing Productivity Using Simple Framing Manipulations." NBER Working Paper No. 15623. Cambridge, MA: National Bureau of Economic Research.
- Kahneman, Daniel. 2003. "Maps of Bounded Rationality: Psychology for Behavioral Economics." *American Economic Review* 93, 5: 1449-1475.
- Kahneman, Daniel. 2011. *Thinking, Fast and Slow*. New York: Farrar, Straus, and Giroux.
- Kahneman, Daniel, and Amos Tversky. 1984. "Choices, Values, and Frames." *The American Psychologist* 39, 4: 341-350.
- 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, Jack L. Knetsch, and Richard H. Thaler. 1991. "Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias." *The Journal of Economic Perspectives* 5, 1: 193-206.
- Karlsson, Niklas, George Loewenstein, and Duane Seppi. 2009. "The Ostrich Effect: Selective Attention to Information." *Journal of Risk and Uncertainty* 38, 2: 95-115.
- Loewenstein, George. 2005. "Hot-Cold Empathy Gaps and Medical Decision Making." *Health Psychology* 24, 4: S49-S56.
- Milkman, Katherine L., John Beshears, James Choi, David Laibson, and Brigitte Madrian. 2011. "Using Implementation Intentions Prompts to Enhance Influenza Vaccination Rates." *Proceedings of the National Academy of Sciences* 108, 26: 10415-10420.
- 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.

- Rothman, Alexander J., Roger D. Bartels, Jhon Wlaschin, and Peter Salovey. 2006. "The Strategic Use of Gain- and Loss-Framed Messages to Promote Healthy Behavior: How Theory Can Inform Practice." *Journal of Communication* 56, S1: S202–S220.
- Service, Owain, Michael Hallsworth, David Halpern, Felicity Algate, Rory Gallagher, Sam Nguyen, Simon Rudd, Michael Sanders, with Marcos Pelenur, Alex Gyani, Hugo Harper, Joanne Reinhard, and Elspeth Kirkman. 2014. "EAST: Four Simple Ways to Apply Behavioural Insights." London: The Behavioural Insights Team.
- 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.
- 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.
- Toll, Benjamin A., Stephanie S. O'Malley, Nicole A. Katulak, Ran Wu, Joel A. Dubin, Amy Latimer, Boris Meandzija, Tony P. George, Peter Jatlow, Judith L. Cooney, and Peter Salovey. 2007. "Comparing Gain- and Loss-Framed Messages for Smoking Cessation with Sustained-Release Bupropion: A Randomized Controlled Trial." *Psychology of Addictive Behaviors* 21, 4: 534-544.

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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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