



# **PRACTITIONER'S PLAYBOOK**

## **FOR APPLYING BEHAVIORAL INSIGHTS TO LABOR PROGRAMS**

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### **The DOL Behavioral Interventions Project**

The Department of Labor Behavioral Interventions (DOL-BI) project was launched to explore the potential of using behavioral science to improve the performance and outcomes of DOL programs. It is sponsored by the DOL Chief Evaluation Office and executed by Mathematica Policy Research and ideas42. The project team has designed, implemented, and rigorously tested three behavioral trials in selected Labor programs. The project team developed behavioral interventions and executed trials in partnership with (1) the Employee Benefits Security Administration and the Department of Labor's Human Resources division, to increase retirement savings, (2) the Occupational Safety and Health Administration, to boost workplace safety, and (3) the Employment and Training Administration, to help unemployed workers become reemployed.

Access reports, briefs, presentations, and infographics on these trials, as well as more tools for applying behavioral insights, by visiting <https://www.dol.gov/asp/evaluation/BISstudy/>.

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## Introduction

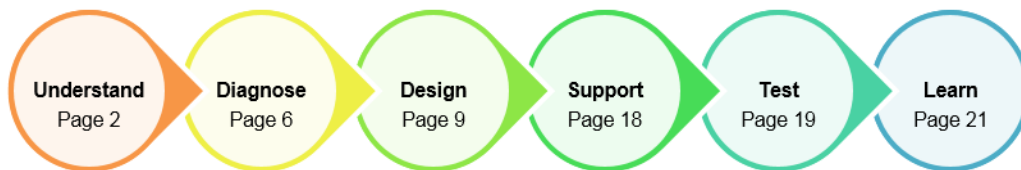
This playbook was developed to give program administrators and managers at the U.S. Department of Labor (DOL) and other social programs an overview of how they can use insights from behavioral science to improve the effectiveness of their programs and services. The playbook is a step-by-step guide on how to identify behavioral problems and use strategies informed by behavioral science.

The Department of Labor Behavioral Interventions (DOL-BI) project team used the six-step process in Figure 1 to develop and test behavioral interventions in partnership with three DOL agencies.

### About behavioral science

Behavioral science studies how people make decisions and act in a complex world. It draws on decades of research in the social sciences to provide a more realistic model of how we make decisions and act in real life. Other approaches commonly assume that we consider all available information, weigh the pros and cons of each option, make the best choice, and then reliably act on it. In practice, however, people often decide and act with imperfect information, do not always make the choice predicted by standard economic models, or fail to act on their choices. Policy makers have begun to align policies programs and products with behavioral science with the objective of improving outcomes for the people they serve.

**Figure 1. DOL-BI six-step behavioral process**



These six steps are:

1. **Understand:** Work with stakeholders to understand the problem you want to solve. It is important to do this *before* making changes to your program to ensure you target the right problem.
2. **Diagnose:** Map out the “behavioral bottlenecks” or cognitive biases (predictable ways in which people seem to make reasoning errors) that may be contributing to the problem.
3. **Design:** Design interventions that fit the program context, the available resources, and your diagnoses, and field-test them to ensure they work as intended.
4. **Support:** Work with frontline staff and managers to implement the intervention, providing support and troubleshooting for effective delivery with minimal disruption to normal activities.
5. **Test:** Whenever possible, design a low-cost evaluation to find out whether the solution works. Collect and analyze existing data to understand short- and long-term results.
6. **Learn:** Communicate findings clearly, concisely, and promptly, and continue to look for ways to make improvements.

In this playbook, we describe each of these steps and walk through them to show how DOL and other program administrators can use behavioral science to identify potential improvements to their policies and programs that can be executed with minimal additional resources. We assume basic familiarity with behavioral science, but not expertise. Resources that supplement this playbook can be found on page 22.

## Step 1: Understand the problem

The first step in the behavioral design process is to define your problem clearly and concretely.

Managers encounter many types of problems in running their programs. Some problems are more likely to benefit from applications of behavioral science—we refer to these problems as having “behavioral” components—whereas others will be more responsive to traditional solutions. Below is an explanation of some of the types of problems that managers frequently encounter in labor and other social programs—problems that are likely to have a behavioral component.

**Low take-up.** *Fewer people than expected participate in a program that would benefit them.* Some DOL programs may be underused by their target populations. Many programs that have clear benefits may still suffer from low participation rates. In some cases, this may be due to ineffective outreach or education about the program’s benefits. But sometimes the take-up problem persists even with strong marketing.

**Poor follow-through.** *People do not take all the steps needed to benefit from a program.* People may intend to take a certain action, but fail to do so. For example, they may intend to enlist workforce staff help to begin their job search soon after losing their jobs, but find it hard to get started.

**False beliefs.** *People misunderstand aspects of a program or base their choices, decisions, and actions on incorrect assumptions.* People may have misperceptions about DOL or other social programs that cause them to behave in unexpected ways. For example, people may not understand the eligibility rules for a program, and consequently do not apply when they could benefit from the support.

**High attrition.** *More people start a program than finish it.* People may start a program, but fail to complete it. For example, they may be required to attend a series of sessions to complete a program they opted to participate in, but they only attend the first or a few sessions and then drop out.

We discuss some of the reasons behind these problems in Step 2, Diagnose behavioral bottlenecks.

### Identify strategies to understand the problem

To understand your targeted problem fully, you should employ multiple strategies. Below, we discuss some of the strategies (also listed in Figure 2) that you can use to deepen your understanding of the problem. Not all of these strategies may be feasible in your specific program

#### Limiting our own biases

When trying to address an important problem, we often begin with a particular solution already in mind—one that we have used before that has been effective in solving similar problems. It is often tempting to move immediately to the design stage and begin adapting the solution to the problem at hand.

However, if we do so we can fall prey to “confirmation bias.” When we believe that a certain solution is likely to be effective, we tend to look for information that reinforces that belief and discard information that conflicts with it. This is not something we do on purpose. It is simply a natural tendency that many of us fall into unless we specifically resist it. This first step, Understand the problem, and the next one, Diagnose behavioral bottlenecks, help limit the effects of our own biases during the behavioral design process.

#### Figure 2. Checklist for understanding the problem

- Observe behavior
- Talk to users
- Understand multiple perspectives and types of users
- Use data to explore patterns of user behavior

context. However, using multiple strategies will enable you to explore the problem from different perspectives and will likely yield more insights. Note that these same strategies can be effective in refining your behavioral diagnoses (see Step 2).

**Observe behavior.** Find opportunities to watch people engage in program services outside of a research context. If there is a public venue for the program, you may be able to quietly watch program services taking place. Sometimes important insights about how people engage with the program will not come from talking to users or staff directly, because they are so familiar with the program's operations that they may not know which features are unusual or unique.

**Talk to users.** List the topics you want to discuss with users, and write down some of the questions you plan to ask. Check that none of your questions will be leading people to answer a certain way. For example, asking "What is your favorite part of the program?" assumes that people like or are satisfied with the program. A good practice is to also write down the answers you expect people to give—if the actual answers you get are different, this suggests there is something happening that you did not anticipate. Seek to understand people's day-to-day realities and their experiences and perspectives on the program and the agency. If it is not possible to talk to users, review program procedures and resources while adopting a user perspective.

To help you get started, Table 1 has examples of useful questions to ask. It's important to focus on "What?" or "How?" questions about people's behavior, even if you are most interested in "Why?" This is because people often do not fully understand why they take a particular action, and might even make up a justification for their motivations on the spot without realizing they are doing so.

**Understand different perspectives.** Be sure to get input from users who may have different perspectives on the program. Different people may encounter the same problem, but they may not be affected by the same behavioral bottlenecks. In addition, discuss the issue with frontline staff and managers to gain insights on different program users. This discussion should encompass demographic diversity (users of different ages, genders, races, and income levels) and a range of experiences with the program (new and highly experienced users; satisfied and dissatisfied users).

Although it can be efficient to collect feedback through focus groups, which allow you to talk to multiple people simultaneously, it's useful to hold one-on-one conversations whenever possible. People may be more willing to open up to you and speak honestly about their experiences and motivations in a more intimate context. Also, in focus groups a few people can monopolize the discussion.

It is also important to understand the perspectives of the staff who run the day-to-day operations and the views of administrators who are considering the "big picture." Users, staff, and administrators will not always agree on what the problem is, why it happens, or even whether it exists. It's important to engage people who see the program from different angles in order to uncover and understand the full range of issues at play.

**Table 1. Sample questions to discuss with program users**

Topics	Sample questions	
Familiarity	<input type="checkbox"/> Have you heard of the program? <input type="checkbox"/> What is the purpose of the program? <input type="checkbox"/> Have you used the program?	<i>These are good questions for understanding low take-up and false beliefs.</i>
Perceptions	<input type="checkbox"/> What is the program’s reputation? <input type="checkbox"/> What is your personal impression of the program? <input type="checkbox"/> How do others describe the program? <input type="checkbox"/> What influenced your decision to use or not use the program? <input type="checkbox"/> Would you recommend the program to a family member or friend? Why or why not?	
Goals	<input type="checkbox"/> What personal goals or needs did you expect the program to help you address? <input type="checkbox"/> In what ways did the program do this well? <input type="checkbox"/> In what ways did the program fall short of your expectations?	<i>These are good questions for understanding poor follow-through and high attrition.</i>
Needs	<input type="checkbox"/> What was it like when you used the program? <input type="checkbox"/> Would you use the program in the future? Why or why not? <input type="checkbox"/> If not, what would make you more likely to use the program? <input type="checkbox"/> If you started the program, but stopped participating, what led to that? What would have helped you continue?	

**Use data to explore patterns of user behavior.**

Data can help you understand the whole picture (sample questions you may be able to answer by using program data are in Figure 3). Use administrative data to supplement your conversations with users, staff, and managers. Use the data as a source of additional insights and also as a check for possible biases in user or staff reporting. Talking with users and program staff can yield invaluable information, but individual experiences often do not tell you how program procedures—or user experiences—may vary based on location, the user’s background, or other factors. You can often refine your knowledge of the program by examining administrative data that are already being collected. For example, as part of the DOL-BI project to increase federal employees’ participation in a retirement savings plan, we examined the demographic and employment characteristics of employees who were not contributing at all, or contributing less than 5 percent of their salary, to the savings program.

**Figure 3. Sample questions to explore using program data**

- How many people request information about the program? How many apply? How many start using the program?
- What are the characteristics of people at each of these stages?
- On average, how long do people participate in the program?
- How many people stop using the program before completing it? When do they tend to drop out?
- What are the characteristics of people who start the program but don’t complete it? What are the characteristics of those who do complete it?



Table 2 below provides examples of patterns you may find in administrative data that would signal specific behavioral problems.

**Table 2. Identifying behavioral problems with data**

Behavioral problem	Data evidence
Low take-up	A small percentage of the people who request information about the program or service actually enroll or use it.
Poor follow-through	Particular program tasks or components have lower completion rates.
High attrition	A high proportion of the people who begin using the program or service stop using it at a particular point.

## Step 2: Diagnose behavioral bottlenecks

Once you have a fuller understanding of the problem you are trying to solve, the next step is to determine if it is caused by behavioral bottlenecks or by structural factors (See box below for an explanation of the difference between behavioral and structural factors).

### Develop a behavioral map

Use your knowledge of the context, the users, and the program to map how your target population engages with the program. This can help you identify points at which the users are likely either to make decisions or face roadblocks that can lead them away from the desired outcomes.

To get you started, we've provided an example of a behavioral map in Appendix A that we developed for a trial designed to help employees increase their retirement savings. Below, we describe the types of behavioral problems that are most common and likely to apply in Labor programs. We also discuss "fingerprints" that signal a particular bottleneck might be at play.

#### Multiple types of problems may contribute to poor outcomes

Remember that in some cases, solving the behavioral problem will help you solve others. For example, if program staff spend a lot of time helping people fill out a complex form, simplifying the form can free up staff time and attention for other work. Some problems are structural; for example, if direct service provision is hampered by inadequate resources, misaligned incentives, or poor accessibility, behavioral interventions will not be enough. Other problems may be behavioral (e.g., complex instructions distract people from participating), and simple solutions could be effective.

### Common behavioral bottlenecks

Psychologists have discovered many biases or psychological limitations that could limit people's engagement with Labor and other social programs. One or more of these behavioral bottlenecks may be contributing to the problem you've identified and are trying to solve.

Below, we describe four bottlenecks—limited attention, forgetting, optimism bias, and procrastination—that often contribute to problems observed within Labor and other social programs. These four bottlenecks may or may not be contributing to your targeted problem, however. Figuring out which bottlenecks are at play is like being a detective on a crime scene. We've included lists of common "fingerprints" to help you determine which bottlenecks may be contributing to your problem.

There are many other potential behavioral bottlenecks, and behavioral scientists continue to discover ways that our behavior can surprise us. **To learn more, see the resources listed on page 22 of this playbook.**

**Limited attention.** Research has shown that at any given moment in time, we have a finite amount of attention at our disposal<sup>1</sup>. When we are worried about an important matter, we have less attention available for other tasks. If our attention is divided—for instance, when trying to read a letter from the unemployment insurance agency while helping a young child eat dinner—performance can suffer. In addition, we tend to economize or try to "stretch" our available attention, and sometimes pay much less attention to individual tasks than we think we do. As a result, we can miss details that turn out to be important.

Labor programs can sometimes demand a high level of attention from participants. People may be required to read detailed instructions and follow them precisely. They may be asked to answer complex questions about their past. Or they may be given a long list of options and told to choose one of them. Each of these tasks requires attention—as do many other daily elements of our lives.

Research shows that even small demands on attention can have surprisingly large effects.<sup>2,3</sup> A person whose mind drifts away for a few seconds during an orientation meeting may miss important details he or she will need to recall later.

### Common fingerprints of limited attention

- Complicated instructions
- Actions whose benefits may not be clear to a non-expert or may be far off in the future
- Situations in which people are prompted to pay close attention to details, and may neglect to focus on the big picture

**Optimism bias.** We sometimes overestimate our own abilities or assume everything will go according to plan. Behavioral scientists have found evidence that although people can sometimes be overly pessimistic, the opposite—optimism bias—is more common.<sup>4,5,6,7</sup> We believe, or act as if we believe, that we are luckier than other people we know.

### Common fingerprints of optimism bias

- Having to estimate how long a new or unfamiliar task will take (e.g., finding a new job)
- Having to assess one's own ability and ask for help if needed (e.g., when deciding whether to apply for a supported employment program)
- A low probability event that should still be prepared for (e.g., the decision on whether to purchase long-term disability insurance)

Optimism bias may cause people to believe they don't need to participate in some Labor programs. For example, someone who loses a job may expect to find a new one relatively soon, not sign up for a job search assistance program early in their unemployment, and later struggle, neither searching effectively nor taking advantage of available resources. Alternately, someone may select and start a training program without participating in training counseling, and later find the program too difficult or encounter challenges in making the training work with other commitments.

**Forgetting.** Studies have found that we often plan to take an action in the future, but fail to act when the time comes, even when the stakes are high.<sup>8,9</sup> For instance, we may have to remember to sign up for a class, respond to a letter, or visit an office by a deadline. We may fully intend to do these things, but as time passes, we forget.

Labor program participants may forget to take important actions when the deadline is not in the immediate future. In some cases, this could limit their job prospects (if they fail to attend a session offering help with their job search) or create more of a burden for program staff (if they forget to call a counselor). DOL employees may themselves overlook important tasks, like following up with a program participant at particular intervals.

### Common fingerprints of forgetting

- Tasks that must be completed by a specified time, but not immediately (e.g., scheduling a meeting to review unemployment insurance eligibility)
- Tasks that are best completed a little at a time (e.g., keeping track of monthly job search activities)
- Tasks that must be completed at regular intervals, but provide little or no feedback when the task is completed (e.g., monitoring compliance with OSHA regulations on a job site)

### Common fingerprints of procrastination

- Arduous or unpleasant tasks (e.g., doing taxes)
- Benefits seem hazy or far off in the future, but costs are clear and immediate (e.g., updating retirement contributions and deciding on investment funds)
- No specific deadline for the task (e.g., updating a resume or completing a job application)

**Procrastination.** Most of us have put aside important tasks, believing we will eventually return to them. But some tasks may be set aside again and again, and we never get to them. Even though a certain task may be important, it's never quite urgent enough for us to take immediate action.

It can be easy to procrastinate because delaying a task by a day or two doesn't feel like a big deal in the moment. Studies show that people also tend to be confident that even if they may be giving in to temptation today, they will be more disciplined tomorrow.<sup>10, 11</sup> Yet when tomorrow comes, the same cycle is repeated, and may eventually go on for weeks, or even months.

**Get feedback on your behavioral map to refine and prioritize your hypotheses.** Once you develop your behavioral map and hypotheses, feedback from program staff can help you identify which hypotheses might be valid and worth focusing on. At this stage, administrative data can be especially useful. For example, in designing pilot changes to OSHA's employer citation process as part of the DOL-BI project, the project team used administrative data to assess potential behavioral hypotheses identified with the help of program staff. One of these was that construction contractors might be especially unresponsive to citations. Analysis of program data confirmed this was the case—construction firms make up the majority of nonresponsive employers. Another hypothesis was that employers may take initial steps to resolve a citation (signing a settlement agreement or making an initial payment) but then fail to follow through. OSHA administrative data revealed this hypothesis was incorrect, suggesting there would be limited benefit from following up with those employers. These insights helped the research team refine the focus of the intervention.

## Step 3: Designing solutions

Once you have identified the behavioral bottlenecks contributing to your targeted problem, it is time to design potential solutions, also referred to as “behavioral interventions.” (Throughout this section we refer to these as solutions, but we consider designs to be *potential* solutions unless a rigorous evaluation has found evidence of their effectiveness.) Your designs should follow the diagnoses and address as many of the bottlenecks you discovered as possible.

### Design stages

Designing a behavioral solution typically involves four steps, which are shown in Figure 4 and discussed in detail below.

**Figure 4. Common steps in designing a behavioral solution**



**1**

**Develop specifications.** Write down the goals of your intervention. It may be helpful to revisit the definition of your problem at this stage. Are you trying to increase the total number of participants in a program, or encourage a particular subpopulation to participate? Do you want to improve your scores on a particular program performance metric, or reduce the number of negative outcomes below some threshold? List the bottlenecks you want to alleviate, as well as the constraints you are facing. Common constraints include limits on the resources you have at your disposal—funds, staff availability, or time—to design and implement a solution. Other potentially important constraints include regulations that any intervention must conform to, as well as limits on the ability of frontline staff to implement changes to how they normally operate.

**2**

**Consider known solutions.** It is often the case that the behavioral bottlenecks you have discovered have been addressed by previous behavioral designers in other contexts. Look for examples in both the real world and the academic literature. Note that you may find effective solutions in unlikely contexts, such as the worlds of medicine or education. We provide some examples of evidence-based behavioral solutions in the next section.

**3**

**Fan out and converge.** Start by generating as many ideas as you can without being overly concerned about the quality or feasibility of those ideas. This can often be a group brainstorming activity, where the different group members can build off each other's inspirations. It also may be helpful to alternate between working alone and working together to ensure all ideas are brought out. Work to find different themes and patterns in the lists you and your colleagues generate. Once you are no longer generating new ideas, then begin to combine good ideas and eliminate the ones that are less feasible. As your list narrows, concentrate on the ideas that you think (1) you can implement and (2) will be effective.

**4**

**Iterate and adapt.** Once you have a promising idea for a solution, create a prototype or mock-up of it. This could be the script for an interaction, the text of a letter, or an outline of a process. Share these mock-ups with others and, if possible, implement them on a trial basis in some real-world setting. Use the feedback you receive to develop and refine your ideas.

## Strategies for program design and operations

In this section, we discuss behavioral strategies you may want to consider depending on the problem you are trying to solve. In the first of two subsections, “Strategies for Program Design and Operations,” we present ways to motivate people, address limited attention, and streamline operations.

The second subsection, “Improving Communications,” features advice on how program communications (such as letters or e-mails) can be made clearer and more action-oriented. A simple checklist itemizes common features of such communications that can be slightly altered.

Features of program design and operations can either increase or minimize the potential for behavioral bottlenecks. Fortunately, behavioral strategies can inform how we structure programs to make them more effective. These include strategies you can use to motivate people to take particular actions, diminish the (actual or perceived) complexity of a program or its key components, and streamline program operations so there are fewer points where behavioral bottlenecks may get in the way of people succeeding. **We have also provided these strategies as part of a stand-alone guide in Appendix C.**

## Motivate people

Even when people want to take a given action, they can often benefit from an extra motivational boost. Below, we discuss three behavioral strategies that can increase people’s motivation to get a task done now, without needing to alter program rules or incentives.<sup>12,13,14</sup>

### Invoke social norms

People often consider what “others like me” do when they are making important decisions. This may be because they look to others for guidance or they just don’t want to feel separated from the crowd. If most people are taking the desired action, informing your target audience of this may encourage them to do likewise. But be careful—this strategy can backfire. For example, if members of your audience assume almost everyone complies with program requirements, but you inform them that only two-thirds of people do, it may make them think noncompliance is more acceptable than they thought.

### Remind people of their values or goals before asking them to take important actions

Placing a signature box to certify that the information entered is true at the beginning, instead of the end, of a form can elicit more truthful responses. People may intend to fill out a form accurately, but may err in their own best interest when they are not certain—and still feel comfortable signing that all of the information is correct. If they are reminded to provide truthful information before they write it down, they may be more careful while filling out the form.

### Give opportunities for fresh starts

It is helpful to remind people about important actions they need to take, but these reminders should come at a time when they are likely to be helpful (for example, a day or two before an important appointment). If possible, reminders should be provided through multiple channels such as phone calls, e-mails, text messages, or letters, keeping in mind the communication preferences of the users.



## Address limited attention

We live in a complex and fast-changing world that places lots of demands on our attention, and it is difficult for people to adequately process, understand, and respond to all of those demands. If you recognize this problem when you design or change programs and policies, you can take corrective steps. For example, you can reduce the complexity of the information you present to people, help them process complicated information even if they do not devote their full attention to it, and/or provide reminders.<sup>15,16,17,18,19,20,21,22,23</sup>

### Simplify options

When they are given too many options, people can become overloaded and not choose any of them. People may intend to return to the question later after researching their choices or when they can think more carefully about their options. We can structure choices so people are presented with the most relevant options, or given key information that will make it easier to evaluate the available options (for example, by presenting information about what most people select).

### Provide clear action steps

When communicating action steps, it works best to highlight the next action the user must take along with any relevant instructions. Programs can also help people prepare to take an action; for example, by setting deadlines or providing a task list so people can check off each step as it is completed.

### Provide reminders

It is helpful to remind people about important actions they need to take, but these reminders should come at a time when they are likely to be helpful (for example, a day or two before an important appointment). If possible, reminders should be provided through multiple channels such as phone calls, e-mails, text messages, or letters, keeping in mind the communication preferences of the users.

## Streamline operations

You can sometimes help people by removing barriers to action and giving them clearer paths to achieve their own goals.<sup>24,25,26,27,28</sup>

### Be specific

Give specific information on the benefits of your program instead of providing general information and asking people to seek out the details. This information should still be presented in a way that is easy for people to understand.

### Reduce hassles

Small inconveniences can keep people from following through on their intentions. An easy fix is to minimize unnecessary hassles whenever possible. This could take the form of eliminating extra steps or giving people the necessary guidance for each step along the way. For example, instead of asking someone to call to schedule an appointment, you can give them a pre-specified appointment time that they can change at their discretion, or a choice of two or three available appointment times. This eliminates the step of scheduling an appointment.

### Change the default

Have people opt out of desired, beneficial actions, instead of asking them to voluntarily opt in. For example, an agency can change employees' default retirement savings rate from zero to the level that best matches most employees' circumstances, while giving them the option to change the rate if they want to.

## Communication and Other Behavioral Strategies

### Improving your program communications

Department of Labor agencies—like many other organizations—often communicate in writing. Letters and e-mails are used to ask people to sign up for programs, attend classes, or take other important steps. But sometimes these communications are ineffective when it comes to encouraging people to take the desired actions.

We've designed a simple checklist (Appendix C) that programs can use to quickly assess the effectiveness of their written communications and potentially re-design them to be more actionable and effective. Although it may not always be feasible to complete each item in the checklist, we recommend incorporating as many applicable behavioral insights as possible. Below, we describe each

item in the checklist in detail. We also give, for each item, examples from the DOL-BI trial conducted in collaboration with the Occupational Safety and Health Administration (OSHA). For this trial, we developed a modified citation cover letter, which increased the number of cited employers who engaged with OSHA.

**How easy is it to understand the information being presented?**

People can only respond to communications if they understand them. But people also have busy lives, and may not be able to spend as much time carefully reading communications as program designers wish they did. The more you can do to make your communications easy to read and understand, the more likely it is that people will actually read and follow up on them. Below are important aspects of effective communications that you should consider.

- **Skim test:** Can the targeted reader quickly understand what the communication is about—that is, what the key points are and what the follow-up actions are? If the readers are only skimming your communication briefly, will they get a sense of its importance and relevance?
- **Ease of processing:** Is the font easy to read? Is the format clear? Is information presented in a logical order? Good aesthetics are not just about looking good; they are also about presenting information in a way that imposes minimal demands on the reader. For example, a bulleted list is often easier to understand than a long paragraph.
- **Ease of understanding:** Is the language clear and straightforward? Is there a lot of jargon or other technical information that may not be clear to the reader? Keep in mind that your readers may not know all of the details about your program, and also that they may not immediately know what your communication is about.

The image shows a sample OSHA citation cover letter with three callouts pointing to specific features:

- Easy to find key points and follow-up actions:** Points to the "Step 1 – Choose a Response Option and Act within 15 working days" section, which lists three options: "Option #1 – Discuss with OSHA", "Option #2 – Correct and Pay", and "Option #3 – Contest the Citation".
- Font is easy to read, format is clear:** Points to the "Your Citation Summary" box, which clearly lists the recipient ("Acme Unlimited"), inspection number ("1212121"), total amount due ("Total Amount Due: \$2880.00"), and payment due date ("Payment Due Date: 15 working days after receipt of this letter").
- Simple, non-technical language:** Points to the "Total Number of Violations: 3" and "Your First Correction Deadline is: 12/01/2015" information.

*Is the most important information presented first?*

- **Put your bottom line up front:** The first two paragraphs of your communications should contain the most important information. People rarely read beyond the first section of a letter, so make sure to present the most important information early on. The rest of your document should be easy to understand: include headings or bullet points that start with key words.<sup>29,30</sup>

The screenshot shows a letter from the U.S. Department of Labor, Occupational Safety and Health Administration. The letter is dated December 1, 2015, and is addressed to John Smith. The first two paragraphs of the letter are highlighted with a blue dashed box. A blue arrow points from a text box on the right to the first two paragraphs of the letter. The text box contains the text: "First two paragraphs state the most important information".

**First two paragraphs state the most important information**

*Is the expected response clear?*

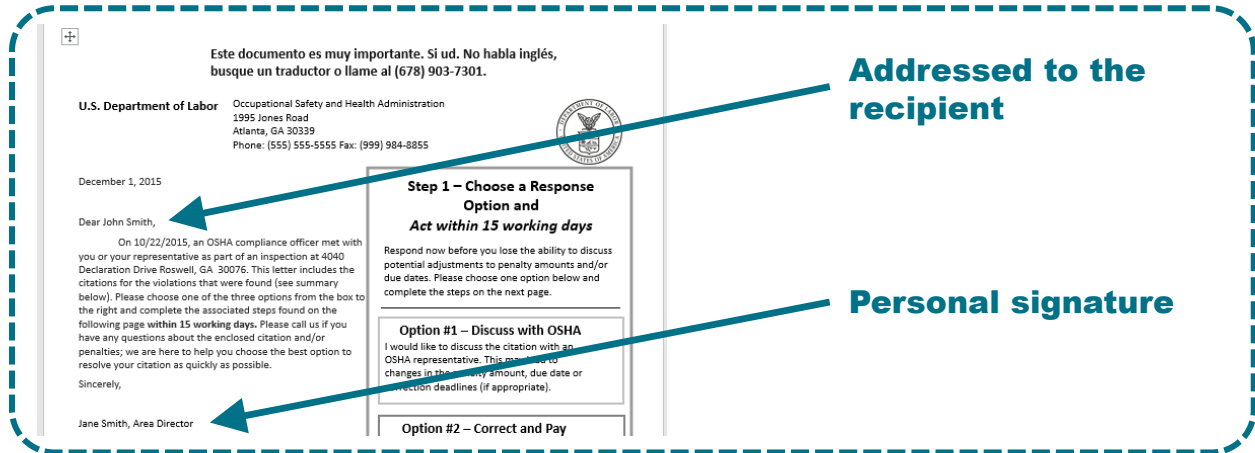
- **Is there a clear, single next step or action for the reader to take?** There may be multiple follow-up steps, but there should be a clear instruction to do the first one.<sup>31</sup>

The screenshot shows a checklist for "Option #1 - Discuss with OSHA". The checklist is titled "Step 2 - Complete One Option Checklist". Below the title, there is a paragraph of text: "Please post a copy of the citation at or near the place where each violation occurred, even if you plan to contest. You can use the checklist to the right to help plan your next steps. Please do not send in your checklist." The checklist itself is a box with two items, each with a checkbox and a date field. A blue arrow points from a text box on the right to the first item of the checklist. The text box contains the text: "Clear instructions for the next step".

**Clear instructions for the next step**

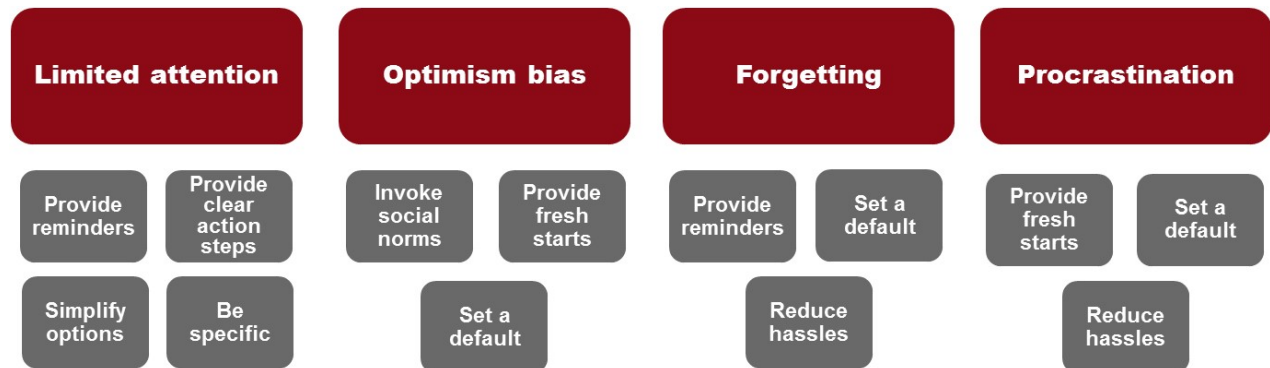
**Can it be personalized?**

- **Did you avoid generic headers** (for example, “Dear Sir/Madam” or “Dear Job Seeker”) and use the recipient’s first name if you know it?
- **Did you avoid impersonalized signatures** that refer to a group or your organization as a whole? Instead, provide a direct, personalized contact (for example, from an individual case manager) whenever possible.<sup>32</sup>



**Remember!** Diagnoses and designs do not necessarily have a one-to-one relationship, as the figure below illustrates. Some behavioral strategies can effectively address more than one bottleneck at the same time. For example, simplifying (or eliminating) a single step in a complex process could address all four of the bottlenecks discussed in the previous section. Also, some bottlenecks can be mitigated using a range of strategies, and you may need to choose the strategy or strategies that are most appropriate for your program context.

**Figure 5. Strategies to address common behavioral bottlenecks**



## Step 4: Support and monitor implementation

Once you have designed your potential solution, or “behavioral intervention,” it is ready to go in the field. Implementation can happen with or without an evaluation component (discussed in the next section).

**Communicate goals to implementing partners.** Whether the behavioral intervention is being evaluated or not, it is important to communicate with program staff about why it is being implemented and what you hope to learn from the process. Program staff are an important part of any new intervention because they will implement any new procedures, answer questions about new processes, and deal with any additional work generated by the intervention. Therefore, their buy-in and support for any new strategies are critical.

**Pilot your solutions so you can tweak design.** Ideally, implementation should be rolled out gradually, so you can begin to assess how your solution fits into the program’s overall workflow. If necessary, you should be prepared to make adjustments to the design and to limit or drop some elements of the solution altogether. Although behavioral interventions are often designed to be low-touch, it is sometimes hard to tell how much staff capacity a given intervention will absorb. Even a simple intervention that is delivered by mail can require substantial help from program staff to connect names and addresses, print and fold letters, stuff envelopes, and affix postage stamps. Some programs may be able to absorb this staff time (for example, if they already have a substantial amount of outbound mail and processes to efficiently prepare it) but others may find that these efforts limit their ability to pursue other goals.

Conducting a pilot test of a behavioral solution can also help you identify more logistical considerations to address in your design. For example, in one trial conducted for the DOL-BI project, reminder postcards were designed to incorporate the delivery date of an earlier mailing. However, pilot testing revealed that implementing staff often did not learn the date of delivery until long after the first mailing had been delivered. After learning this, the project team provided guidance to implementing staff on how to fill in the postcards in cases when they had not yet received notice of the delivery date. This small but important adjustment allowed program staff to successfully implement a time-sensitive component of the design.

**Test variations to learn more about trade-offs.** You also can consider comparing multiple interventions by implementing them simultaneously, to assess which has the most potential or lowest burden, before deciding which to adopt on a wider scale. This allows you to determine which interventions are the most cost-effective for the program, and minimizes your risk if one or more elements of the intervention do not work.

**Get feedback often.** It is also important to get feedback from the participants, staff, and program administrators on how the intervention is affecting their program experiences and/or workflow. Staff will have early insights into both the potential costs and benefits of your proposed solution. They will be able to assess how much of their time and other resources it will take to implement the intervention, and they can observe how the target population is reacting to the intervention. Based on their feedback, you may decide to adjust the intervention to increase its effectiveness.

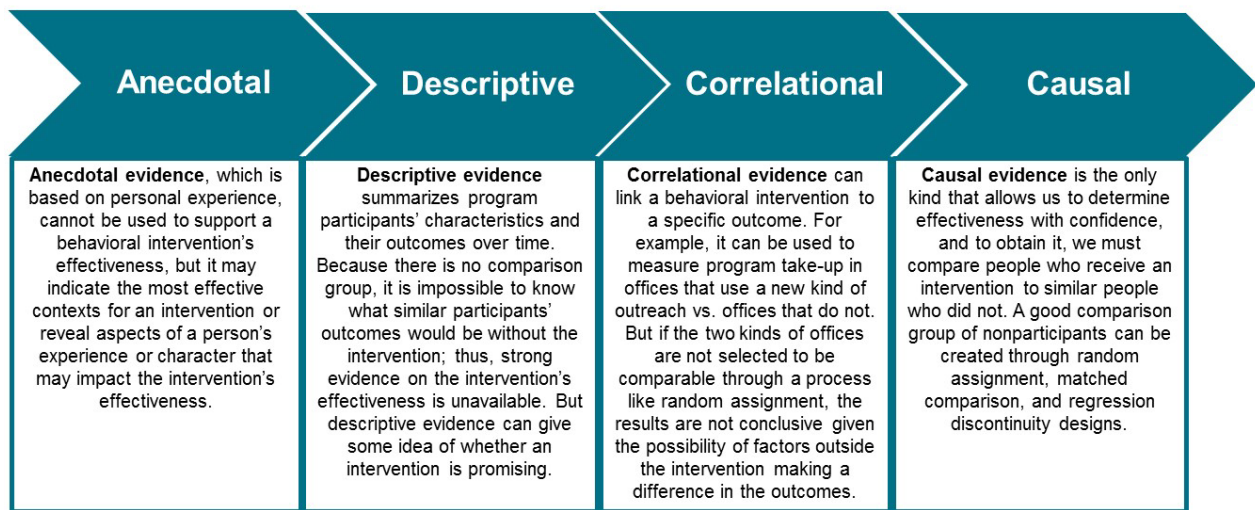
## Step 5: Test your solutions

Behavioral interventions are frequently tested using a variety of methods. This is because we are still learning which behavioral strategies work when and for whom, as well as how to best design behavioral solutions and use behavioral strategies to design more effective programs. The behavioral science field is relatively young, and more evidence is needed to expand our knowledge base.

**Think about the data you may be able to draw on to learn about program effects.** The figure below describes the continuum of types of evidence you can collect about program changes or other improvement efforts in order to determine whether and how the new strategies worked. Testing your behavioral solution may involve strategies that yield one or more of these types of evidence.

To determine *if* your behavioral solution worked, you will often want to employ strategies that yield “causal” evidence, such as an independent evaluation. Behavioral interventions are often tested in this manner to help us, the behavioral designers, confront our own biases. Many behavioral strategies, even those based on a solid foundation in the behavioral sciences, do not work or do not work as anticipated in a new context. Testing allows us to check our diagnosis and design processes, and learn from any errors we may have made.

**Figure 6. Continuum of evidence**



**See if you can adopt rigorous methods to measure impacts.** A range of methods can be used to generate evidence on the effectiveness of behavioral interventions. Although a detailed discussion of these methods is beyond the scope of this playbook, Table B.1 in Appendix B describes some of the approaches that can be used to generate evidence on effectiveness. As the table reveals, methods differ in their implementation requirements and the amount of confidence we can place in their findings.

Importantly, generating rigorous causal evidence on effectiveness does not have to be expensive or complicated. Even randomized controlled trials can be implemented inexpensively, as we have done in the DOL Behavioral Interventions project. Many of the outcomes that you care about and want to examine for evaluation purposes are already captured in existing administrative data, eliminating the

need for your own data collection. However, conducting a high-quality study often requires collaboration between experienced project managers, staff, and independent researchers to design and implement an evaluation that will yield credible evidence.

Furthermore, although rigorous methods like randomized controlled trials are ideal in many cases, they are not the only option. For example, it can be valuable to examine historical program data, comparing outcomes before and after the intervention was implemented. (This is the “interrupted time series” method described in Table B.1.) Especially in instances when there have been no other policy changes, this approach can provide a sense of whether the intervention worked and what it accomplished at a minimal cost.



## Step 6: Learn and decide next steps

After designing, implementing, and testing your intervention to assess its effectiveness in solving the targeted problem, it is valuable to take a step back and reflect on what you learned. Did your intervention work? Which components worked well and which didn't? Did the intervention's effect(s) vary for members of different subgroups? If you ran two or more interventions, which one was most effective and why?

Behavioral interventions may be particularly useful when they are understood not as one-time initiatives but as springboards for ongoing efforts to improve program effectiveness. Behavioral science can work as a tool when you are inventing and refining new program elements, or as a way to customize specific interventions for a particular subgroup. Interventions that are effective in one area of a program may reveal insights that can be used effectively in other areas.

If your intervention did not work (or did not work with some subgroups), it can be useful to try to determine why. You may have to return to the diagnosis phase and talk to the relevant stakeholders again to determine what may have caused the problem. Examining the available data again can be especially useful in uncovering evidence that either confirms or refutes potential explanations for why the solution didn't work as expected. In some cases, your design may not have worked due to events beyond your control. If so, you can consider testing your design again at a different time to see if it might be more effective.

If your intervention worked, you may wish to consider scaling it up, expanding it to new populations that you did not initially reach, or applying it to other problems that may benefit from the same approach. Finally, even if your intervention was effective, the experiences and lessons learned during implementation may prompt you to consider tweaks or additions that may increase its efficacy or help integrate it into ongoing procedures.

Whether the intervention worked or not, it is also worth taking the time to write up what you learned, or for your independent evaluator to develop a report, to share with your colleagues and the broader behavioral science community. This can help others learn from your experiences, and build capacity among other program managers and practitioners for this type of work while continuing to grow the knowledge base on which behavioral strategies work and don't work in various contexts.

## To learn more

The DOL-BI project was conducted for the U.S. Department of Labor, Chief Evaluation Office, by [Mathematica Policy Research](http://www.mathematica-mpr.com/) (<http://www.mathematica-mpr.com/>) and [ideas42](http://www.ideas42.org/) (<http://www.ideas42.org/>). To learn more about behavioral science and how it can be applied to Labor programs, you can visit the project's [webpage\(s\)](#) at:

- <https://www.mathematica-mpr.com/our-publications-and-findings/projects/behavioral-interventions-for-laborrelated-programs>
- <https://www.dol.gov/asp/evaluation/BISstudy/>

There you can find a number of reports on the behavioral strategies we developed and tested in partnership with various DOL agencies, and learn about our findings. You can also access other useful resources, including a checklist for communications and a summary of lessons learned from the DOL-BI project. Below, we list resources you can access to learn more about behavioral science.

### General interest books

Books	Author(s)
<i>Thinking, Fast and Slow</i>	Daniel Kahneman
<i>Predictably Irrational</i>	Dan Ariely
<i>Scarcity</i>	Sendhil Mullainathan and Eldar Shafir
<i>The Undoing Project</i>	Michael Lewis
<i>Nudge</i>	Cass Sunstein and Richard Thaler

### Practitioner guides for using behavioral science

Guide	Website
Behavioral Design	<a href="http://www.cgdev.org/files/1426679_file_Datta_Mullainathan_Behavioral_Design.pdf">http://www.cgdev.org/files/1426679_file_Datta_Mullainathan_Behavioral_Design.pdf</a>
Behavioral Economics and Social Policy	<a href="http://www.mdrc.org/sites/default/files/bias_final_full_report_rev4_15_14.pdf">http://www.mdrc.org/sites/default/files/bias_final_full_report_rev4_15_14.pdf</a>
Practitioner's Guide to Nudging	<a href="http://www.rotman.utoronto.ca/-/media/Images/Programs-and-Areas/behavioural-economics/GuidetoNudging-Rotman-Mar2013.pdf">http://www.rotman.utoronto.ca/-/media/Images/Programs-and-Areas/behavioural-economics/GuidetoNudging-Rotman-Mar2013.pdf</a>
World Development Report 2015: Mind, Society, and Behavior	<a href="http://www.worldbank.org/en/publication/wdr2015">http://www.worldbank.org/en/publication/wdr2015</a>

**Organizations helping to apply behavioral science to inform public policy**

Organization	Website
<b>General Services Administration’s Office of Evaluation Sciences (formerly White House Social and Behavioral Science Team)</b>	<a href="https://www.gsa.gov/portal/category/100270">https://www.gsa.gov/portal/category/100270</a>
<b>Behavioral Science and Policy Association</b>	<a href="https://behavioralpolicy.org">https://behavioralpolicy.org</a>
<b>Behavioral Exchange</b>	<a href="http://www.bx2016.org/">http://www.bx2016.org/</a>
<b>The Center for Advanced Hindsight at Duke University</b>	<a href="http://advanced-hindsight.com/">http://advanced-hindsight.com/</a>
<b>Behavioral Economics in Action at Rotman (BEAR) at the University of Toronto</b>	<a href="http://www.rotman.utoronto.ca/FacultyAndResearch/ResearchCentres/BEAR">http://www.rotman.utoronto.ca/FacultyAndResearch/ResearchCentres/BEAR</a>
<b>The Behavioral Insights Group at Harvard</b>	<a href="http://cpl.hks.harvard.edu/behavioral-insights-group">http://cpl.hks.harvard.edu/behavioral-insights-group</a>
<b>The Behavioral Insights and Parenting Lab at the University of Chicago</b>	<a href="https://biplab.uchicago.edu/">https://biplab.uchicago.edu/</a>
<b>The Behavioral Insights Team</b>	<a href="http://www.behaviouralinsights.co.uk/">http://www.behaviouralinsights.co.uk/</a>
<b>Behavioral Economics for Early Literacy and Learning at New York University</b>	n/a
<b>The Center for Applied Behavioral Science at MDRC</b>	<a href="http://mdrc.org/project/center-applied-behavioral-science-cabs">http://mdrc.org/project/center-applied-behavioral-science-cabs</a>

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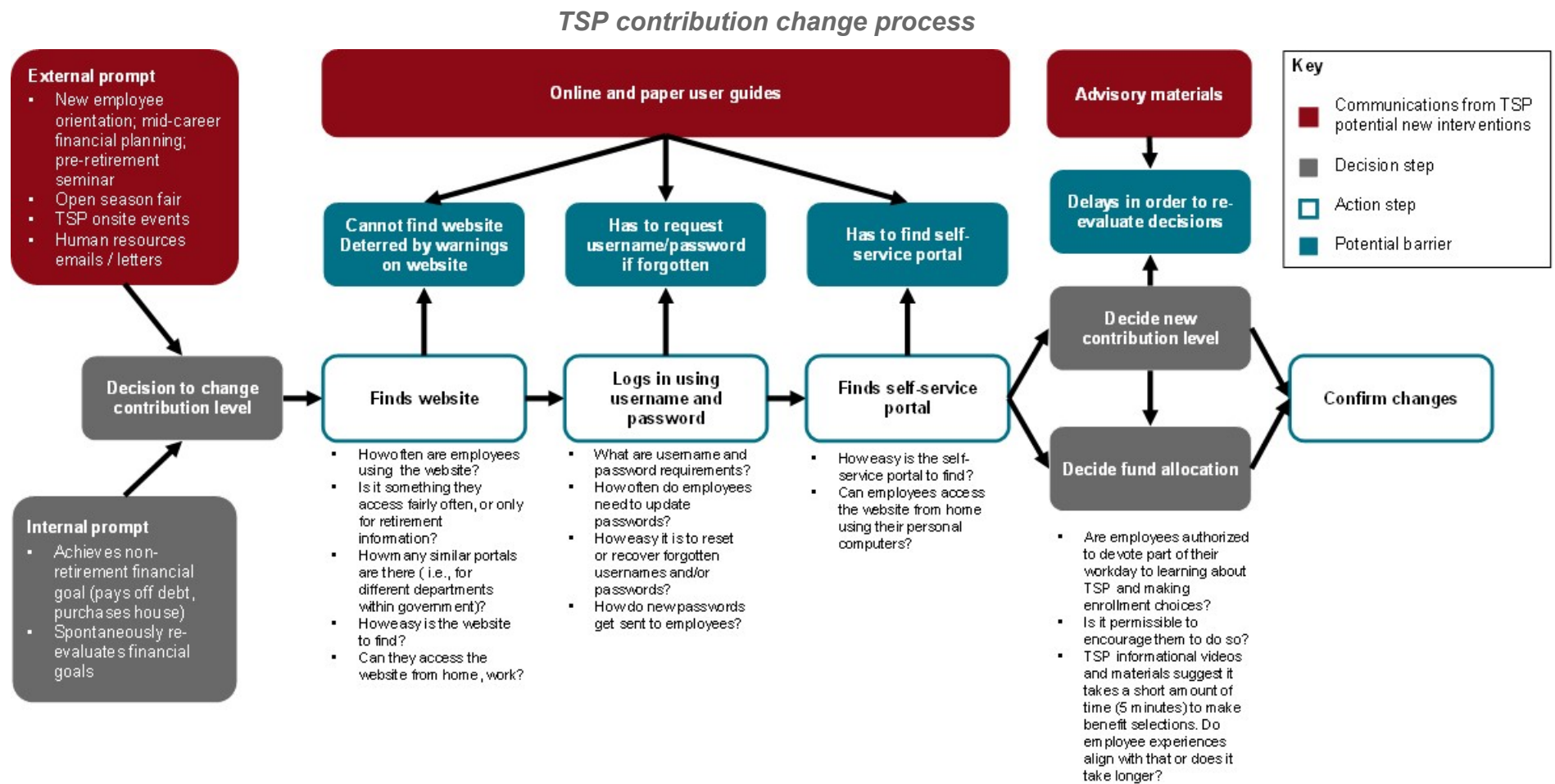
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## **APPENDIX A**

**Figure A.1. Behavioral map of how employees engage with a retirement savings program**





## **APPENDIX B**

**Table B.1. Methods to generate evidence on program effectiveness**

	Interrupted time series	Difference-in-differences	Regression discontinuity	Matched comparison	Random assignment
<b>Brief description</b>	Compare levels on outcome(s) of interest before and after implementing the behavioral intervention (may also account for trends in outcomes before and after the intervention).	Compare the <i>change</i> in outcome(s) before and after implementing the intervention for participants and nonparticipants.	If a “continuous” characteristic determines who receives the intervention (such as a household income eligibility threshold), individuals just above the cutoff are generally very similar to those just below. We can use statistical methods to compare the outcomes of participants to those of similar individuals on the other side of the eligibility cutoff.	For each individual or organization receiving the intervention, use statistical methods to identify a similar “matched” person or organization that did not receive it. Compare the outcome(s) of participants and their “matches.”	Determine randomly (e.g., by lottery) which individuals or organizations can receive the intervention, and then compare the outcome(s) for those who can (treatment) and those who cannot (control group).
<b>Requirements for Implementation</b>	Data on the outcome(s) for participants only, for different points in time before and at least one point in time after implementing the intervention	Data on the outcome(s) for one or more points in time before and after implementation, for both participants and nonparticipants	A threshold (e.g., an eligibility score) must be used to determine who receives the intervention, and must be applied without exceptions.	Detailed data on a wide range of background characteristics and outcomes, ideally obtained at different points in time, for both participants and nonparticipants	Random assignment must be integrated into program procedures before deploying the intervention.
<b>Confidence in findings</b>	<b>Low.</b> This method doesn’t allow you to rule out other factors that may be influencing outcomes.	<b>Low to medium.</b> Incorporating a comparison group and change over time provides more information, but does not rule out the effects of unmeasured differences between participants and nonparticipants.	<b>Medium.</b> Because participants just above and just below the cutoff are nearly identical, you can place greater confidence in the findings. However, study findings may not be valid for scores farther away from the cutoff.	<b>Medium.</b> The more similar the matched pairs are on measured background characteristics, the more reliable the measured impact of the intervention is. But it is still not possible to completely rule out the influence of unmeasured background characteristics on the outcome(s).	<b>High.</b> Because the two groups were created at random, they should have the same profiles on measured and non-measured characteristics. This approach provides the most reliable evidence of effectiveness.
<b>To learn more</b>	<i>The Handbook of Practical Program Evaluation</i> , Part I, Chapters 3–7. Available at <a href="https://books.google.com/books?id=p-IRCgAAQBAJ&amp;printsec=frontcover&amp;dq=handbook+of+practical+program+evaluation&amp;hl=en&amp;sa=X&amp;ved=0ahUKEwjSr72LqfzRAhVY8WMKHU7UDhYQ6AEIJTAA#v=onepage&amp;q=handbook%20of%20practical%20program%20evaluation&amp;f=false">https://books.google.com/books?id=p-IRCgAAQBAJ&amp;printsec=frontcover&amp;dq=handbook+of+practical+program+evaluation&amp;hl=en&amp;sa=X&amp;ved=0ahUKEwjSr72LqfzRAhVY8WMKHU7UDhYQ6AEIJTAA#v=onepage&amp;q=handbook%20of%20practical%20program%20evaluation&amp;f=false</a> .				

## **APPENDIX C**

# Behavioral Insights Communications Checklist

## Using the checklist

The way we write and structure documents can make them much more impactful.

Before sending out an important communication, make sure to review the checklist and see if there are edits you can make to improve it. While it may not always be possible to complete each item on the checklist, communications that incorporate more behavioral insights will have greater potential.

IS IT EASY TO UNDERSTAND?	IS THE IMPORTANT INFORMATION FIRST?	CAN IT BE PERSONALIZED?
<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Skim-test:</b> Can the targeted reader immediately understand what the communication is about – i.e., what the key points are and what the follow-up actions are?</li> <li><input type="checkbox"/> <b>Ease of processing:</b> Is the font easy to read? Is the format clear? Is information presented in a logical order?</li> <li><input type="checkbox"/> <b>Ease of understanding:</b> Is the language simple? Is there too much jargon or technical information that won't be clear to a casual reader?</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Do the first 2 paragraphs state the most important information?</b> People rarely read beyond the first section of a letter, so make sure to state important information early. The rest of your document should include headings or bullet points that start with key words.</li> </ul> <hr/> <p style="text-align: center;"><b>IS THE ACTION CLEAR?</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Is there a clear, single next step or action to take?</b> There may be multiple follow-up steps, but there should be a clear instruction to do the first one.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Did you avoid generic headers</b> (e.g., “Dear Sir/Madam” or “Dear jobseeker”) and use the recipient’s first name if possible?</li> <li><input type="checkbox"/> <b>Did you avoid using impersonalized signatures</b> that refer to a group or your organization as a whole? Instead provide a direct, personalized contact (e.g., individual case manager).</li> <li><input type="checkbox"/> <b>Did you convey that you know and understand the recipient and his/her needs?</b></li> </ul>

## Behavioral Insights for Labor-Related Programs

Effective Department of Labor programs often require people to take action to get the benefits offered, but people often fail to do so. The reasons can be varied: they aren't motivated to participate or they intend to but get distracted, or they begin and then are deterred by seemingly minor operational hassles. Fortunately, behavioral scientists have developed many techniques to improve the effectiveness of program procedures—techniques that have been applied successfully in many Department of Labor programs. *(Read about pilots conducted by Mathematica Policy Research and ideas42 for the DOL Chief Evaluation Office, as well as other tools for applying behavioral insights, at <https://www.dol.gov/asp/evaluation/BISstudy/>.)*

# Quick Steps to Improve Programs Using Behavioral Insights

## Behavioral Strategies for Labor Programs

*Behavioral science has shown that small changes to the ways we structure programs can have a large effect on their impact. Start making changes in these three areas:*



### MOTIVATE PEOPLE:

Encourage people to complete a certain action.



### ADDRESS LIMITED ATTENTION:

Help people remember to complete tasks.



### STREAMLINE OPERATIONS:

Remove barriers to action.

<p><b>Invoke social norms:</b> People often consider what “others like me” do when making important decisions. Give people information about what others are doing, and encourage them to follow their peers’ example.</p>	<p><b>Simplify options:</b> When presented with too many options people become overloaded and tend to not make a choice at all. Limit options to the most relevant choices.</p>	<p><b>Be specific:</b> Give specific, yet simplified, information on the benefits of your program, instead of providing general information and asking people to seek additional details.</p>
<p><b>Remind people of their values or goals before important actions:</b> Evoke values by prompting people before they take an action. For example, place a signature box (certifying the entered information is true) at the beginning, not the end, of a form.</p>	<p><b>Provide clear action steps:</b> Clearly state the next action the user must take and any relevant instructions, if needed. Set deadlines and provide a simplified task list allowing people to check off tasks as they are completed.</p>	<p><b>Reduce hassles:</b> Small inconveniences can prevent people from following through. Minimize or reduce unnecessary hassles. For example, give people an appointment time, instead of asking them to call to schedule an appointment.</p>
<p><b>Provide “fresh starts”:</b> People are more likely to follow goals after important landmarks (New Years, birthday or the start of a week). Contact people then to give new opportunities to take action.</p>	<p><b>Provide reminders:</b> Remind people about important actions they need to take at a time that is likely to be helpful.</p>	<p><b>Change the default:</b> Have people opt out of the desired, beneficial action, rather than asking them to voluntarily opt in.</p>

## Behavioral Insights for Labor-Related Programs

Effective Department of Labor programs often require people to take action to get the benefits offered, but people often fail to do so. The reasons can be varied: they aren’t motivated to participate or they intend to but get distracted, or they begin and then are deterred by seemingly minor operational hassles. Fortunately, behavioral scientists have developed many techniques to improve the effectiveness of program procedures—techniques that have been applied successfully in many Department of Labor programs.

*(Read about pilots conducted by Mathematica Policy Research and ideas42 for the DOL Chief Evaluation Office, as well as other tools for applying behavioral insights, at <https://www.dol.gov/asp/evaluation/BISStudy/>.)*

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