



Office of Evaluation Sciences
U.S. General Services Administration

A BEHAVIORAL INSIGHTS GUIDE

— for —

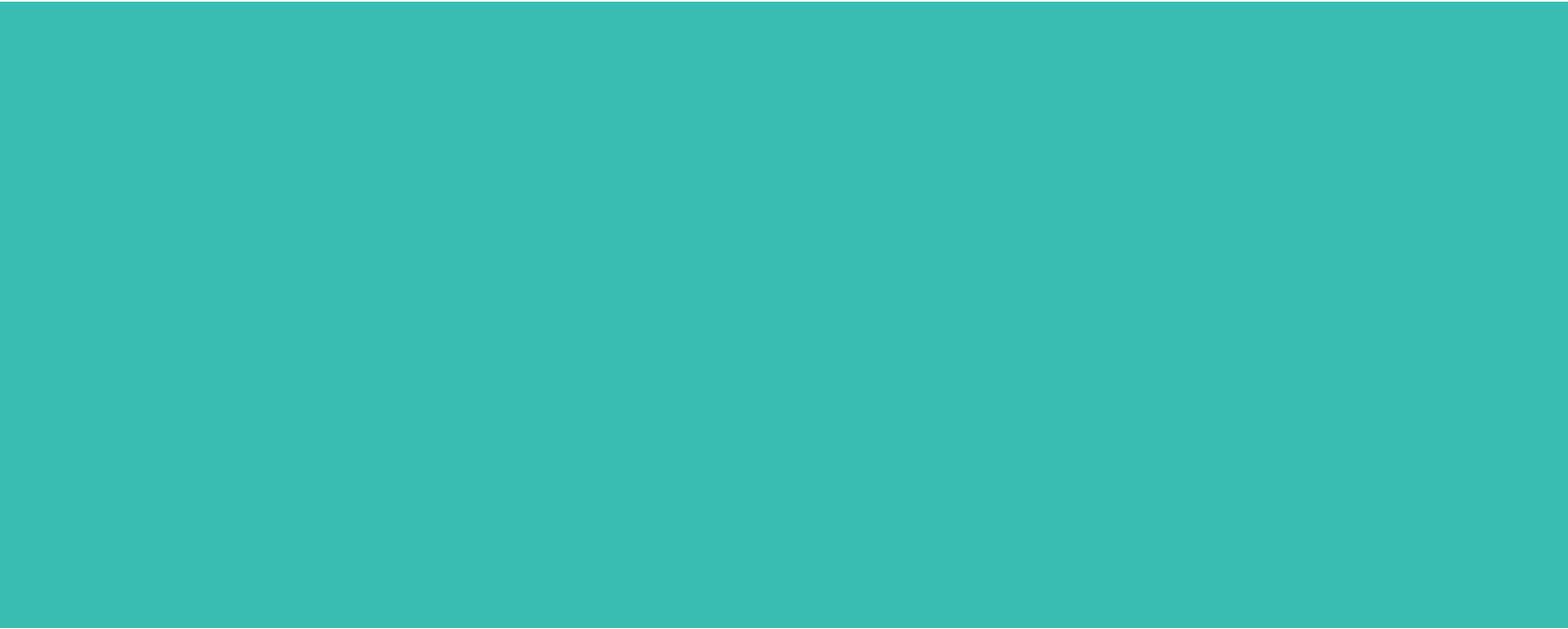
Improving Payment Integrity



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— FOREWARD

Preventing improper payments remains a longstanding priority for both the legislative and executive branches. Over the years, the executive branch developed and applied several tools to prevent improper payments, including data analytics and automation. Understanding the beneficiaries' behavior when providing information to the federal government provides a relatively new, but significant, tool for agencies to prevent improper payments.¹ For example, as this guide will explain, behavioral insights can “[c]hang[e] the way options are ordered or presented[, thereby] help[ing] reduce cognitive burden and enabl[ing] individuals to make better choices.”²

This guide distills extensive research and experience in applying behavioral insights to the application and payment processes. Understanding how behavioral insights can apply to your agency or program's financial management may produce benefits for your agency or program on multiple levels.

First, understanding behavior helps identify stages within your financial processes where changes may reduce errors and improve payment accuracy. For example, as this guide will demonstrate, altering forms may reduce confusion and improve the quality of information provided, thereby reducing payment errors.³

Second, understanding behavior and related insights can lead to improved user experiences and reduce barriers to fully participating in the program.⁴ As this guide will describe, behavioral insights will help programs better understand the individuals applying for federal funding and the individuals processing the applications and payments. Changes based on behavioral insights can improve those individuals' understanding of the program, their own obligations, and the program's goals. These changes can reduce cognitive and administrative barriers to an individual's better appreciation of the program and its requirements, thereby improving public

1. Office of Management and Budget. M-21-19, Appendix C to Circular No. A-123, Requirements for Payment Integrity Improvement (March 5, 2021), p. 34. Retrieved from <https://www.whitehouse.gov/wp-content/uploads/2021/03/M-21-19.pdf>

2. Id.

3. For example, the transmittal letter accompanying M-21-19 states: “One of the priorities in this guidance is reducing administrative burden to allow agencies to focus on preventing improper payments and ensuring taxpayer money is serving its intended purpose.” Also see the Memorandum on Behavioral Science Insights and Federal Forms (September 15, 2015). Retrieved from <https://obamawhitehouse.archives.gov/sites/default/files/omb/infoereg/memos/2015/behavioral-science-insights-and-federal-forms.pdf>

4. For example, Office of Management and Budget. Circular No. A-11, Preparation, Submission and Execution of the Budget (April 28, 2021), section 280.6 states: “Adopting a customer-focused approach to the implementation of services, involving and engaging customers in iterative development, leveraging digital technologies and leading practices to deliver more efficient and effective interactions ...”

perceptions about the program and its effectiveness.⁵

Third, by leveraging behavioral research and evaluation, federal agencies can analyze their performance in preventing improper payments through the lens of behavioral studies in addition to financial data. This guide's introduction of behavioral sciences into assessments of payment integrity would only deepen the agencies' commitment to evidence-based decision-making.⁶

This guide serves a confluence of interests for federal agencies by improving payment integrity, programmatic results, and evidence-based decision-making. This guide does not suggest that utilizing behavioral insights can solve all problems or prevent improper payments; instead, agencies are urged to use this guide as an additional tool to prevent improper payments and improve the program by enhancing user experiences and supporting evidence-based decisions. This playbook should be leveraged to further your much-appreciated efforts to achieve good financial management and stewardship of taxpayer dollars.

Sincerely,

United States Chief Financial Officers Council

5. For example, see Barack Obama. "Executive Order 13610: Identifying and reducing regulatory burdens." Federal Register 77, no. 93 (2012), which discusses the importance of reviewing the justifications for burdens and urging the reduction of regulatory burdens.

6. Barack Obama. "Executive order 13707: Using behavioral science insights to better serve the American people." Federal Register 80, no. 181 (2015): 56365-56367, and Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking (January 27, 2021), Retrieved from <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/memorandum-on-restoring-trust-in-government-through-scientific-integrity-and-evidence-based-policymaking/>

1. Introduction



This playbook helps readers explore whether and how a ***behavioral insights*** approach can be used to influence people’s behavior and decisions to reduce improper payments.* ***Improper payments*** include payments made by the government to the wrong person or in the wrong amount.⁷ Preventing improper payments is described as ensuring ***payment integrity***.

The playbook has the following sections

- [Section 1](#) introduces behavioral insights, gives background on improper payments, and makes suggestions about who should use the playbook, when to use it, and how to use it.
- [Section 2](#) discusses 9 broad behavioral insights principles with examples of their applications to improper payments.
- [Section 3](#) covers risks of the behavioral insights approach, and how to narrow in on which principles to apply in which situations.
- [Section 4](#) has seven steps to applying a behavioral insights approach, from identifying who is involved and what they’re doing, to mapping out changes to try. This section includes examples of completed worksheets for each of the seven steps (blank worksheets can be found in [Section 6.1](#)).
- [Section 5](#) includes four longer case studies of instances where behavioral insights principles were applied to address improper payments.
- [Section 6](#) has additional material including a discussion of the link between behavioral insights and improper payments root causes and cause categories, and a list of further resources for some relevant topics.

Feel free to dip into different sections as you like. The playbook need not be read in order.

7. The definition is found in the Office of Management and Budget (OMB) Circular A-123, Appendix C (OMB M-21-19). The content of this playbook is also relevant to “unknown payments,” where an agency is unable to determine whether the payment falls into the proper or improper category. For simplicity, we refer to these as “unknown.”

* Note that this playbook is an optional resource for agencies to use and does not supersede any existing guidance in OMB Circular A-123, Appendix C, or A-123.

1.1

What is the behavioral insights approach?

The behavioral insights approach tries to understand how people make decisions. This approach utilizes applications from multiple disciplines including cognitive sciences like psychology and social sciences like economics. A behavioral insights approach is associated with light-touch interventions like simplification, personalization, and social norm comparison (which are all described in more detail later in the playbook) that have become increasingly common in academic literature and government programs.

You might have heard these sorts of interventions referred to as a “nudge” (the title of Richard Thaler and Cass Sunstein’s influential book about using these techniques to influence behavior).⁸ And you may know some of the prominent examples of nudges, like making organ donations or retirement savings the default options instead of requiring people to actively opt-in.^{9,10}

[The Office of Evaluation Sciences](#) (OES) at the U.S. General Services Administration (GSA) applies a behavioral insights approach in collaboration with a wide range of government agencies. OES created this playbook to share ideas about using behavioral insights to reduce improper payments. The playbook builds on work such as a Behavioral Insights Toolkit created by the Internal Revenue Service (IRS), which describes ways to integrate a behavioral insights approach into tax administration.¹¹

A behavioral insights approach can lead to trying different things, compared to traditional approaches that may be based on an idealized and unrealistic idea of how people make decisions. To give one example, those other approaches usually assume that more information is better. A supervisor who wants their employees to fill in timesheets at the end of each week instead of waiting until the end of the pay period might write a long detailed memo about why they should. However, most of the employees may not carefully read all the information they’re given and don’t consciously weigh all the pros and cons of different options.



A behavioral insights approach can lead to trying different things, compared to traditional approaches that may be based on an idealized and unrealistic idea of how people make decisions.

8. Richard H. Thaler and Cass R. Sunstein. *Nudge: Improving decisions about health, wealth, and happiness*. (New York: Penguin, 2009).

9. Eric J. Johnson and Daniel G. Goldstein. “Defaults and donation decisions.” *Transplantation* 78, no. 12 (2004): 1713-1716.

10. John Beshears, James J. Choi, David Laibson, and Brigitte C. Madrian. “The Importance of Default Options for Retirement Saving Outcomes: Evidence from the United States.” *NBER Working Paper* (2007), No. 12009.

11. Internal Revenue Service. Behavioral Insights Toolkit. (2017). Retrieved from <https://www.irs.gov/pub/irs-soi/17rpirsbehavioralinsights.pdf>

A behavioral insights approach starts from the understanding that human attention is limited, and that people often act without carefully thinking. Based on this recognition, an emailed request for timesheet completion could be made shorter and formatted with bullet points to make the key points simpler to comprehend.

As an example of the power of short, simple messages, researchers who emailed 7,000 school district leaders a survey invitation found that 4.8% of those who were sent a 49-word email clicked to take the survey, compared to only 2.7% of those who were sent a 127-word email invitation.¹² Their two messages are shown in Figure 1.

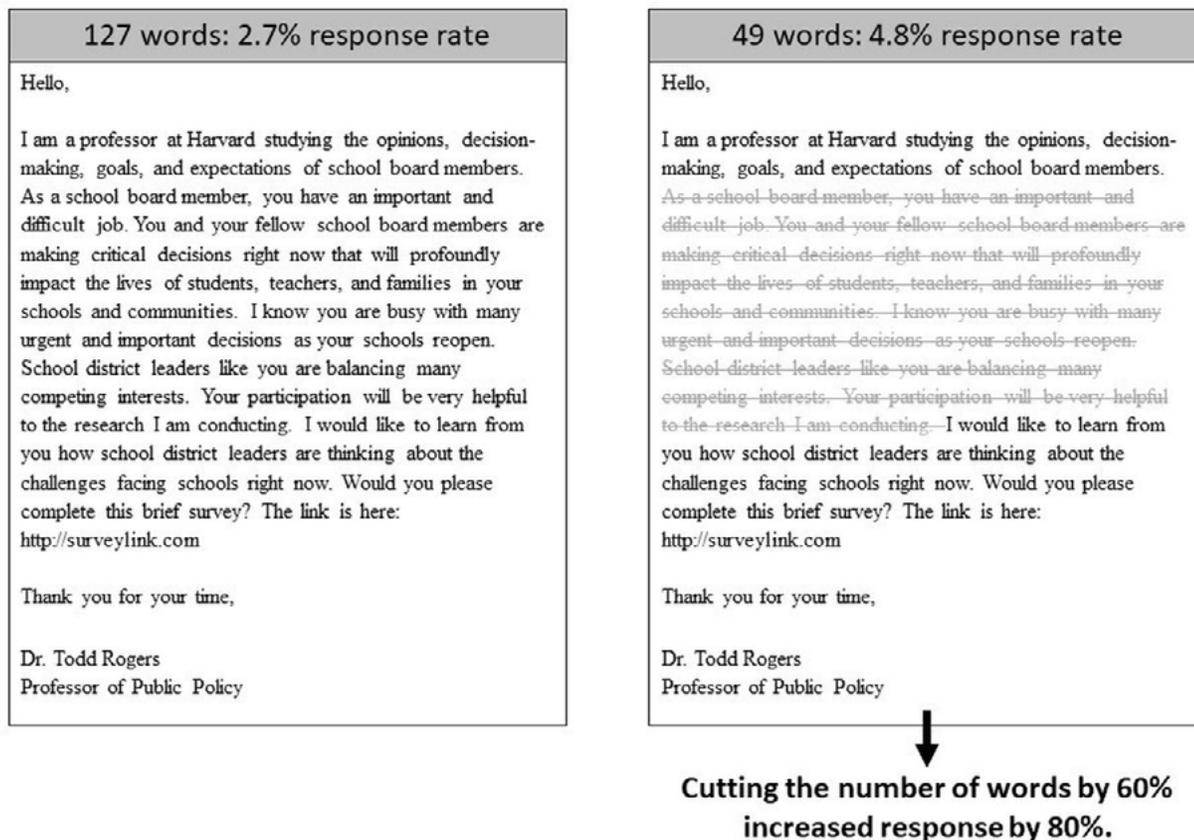


Figure 1. The shorter version of a message sent to school district leaders had a higher response rate.

Simplifying communications is just one way to apply behavioral insights. In the timesheet example, drawing from the principle that simpler tasks are more likely to get done, the timesheet procedure could be changed so that employees are sent a sheet that is pre-filled with a duplicate of the hours they worked the previous week. If they only need to “Accept” or “Revise” instead of entering a lot of repetitive information each week, employees should be more likely to comply.

12. Todd Rogers and Jessica Lasky-Fink. “Write shorter messages: Research confirms: Simpler communications are much more likely to be read.” *Boston Globe*. December 19, 2020. <https://www.bostonglobe.com/2020/12/19/opinion/write-shorter-messages/>

To apply a behavioral insights approach to improper payments, you:

1. identify which decisions and behaviors are contributing to improper payments, and then,
2. apply one or more principles like the ones in [Section 2](#), and if appropriate,
3. evaluate how well the changes work, and continue to
4. look for places with room for further improvement.

One important thing to keep in mind is that even when improper payments result from technology limitations (e.g., an inability to currently link or verify datasets), they can often be partially addressed in a non-technological way using behavioral insights. The principles of behavioral insights can also be used in combination with technology, like to send different messages to different user segments. Effective changes based on behavioral insights principles can reduce errors, save time and money, and improve experiences for payors and payees.

1.1.1

What kind of improper payments are the best fit for behavioral insights?

The Office of Management and Budget (OMB) has issued several memoranda with guidance on payment integrity. M-21-19 notes that for the purposes of implementing the Payment Integrity Information Act of 2019 (PIIA), all program outlays can be categorized as: proper payment, improper payment (IP), or unknown (UP). The memorandum says:



“At a high level, a payment is ‘proper’ if it was made to the right recipient for the right amount, a payment is ‘improper’ if it was made in an incorrect amount or to the wrong recipient, and for instances where an agency is unable to determine whether the payment falls into the proper or improper category that payment should be considered an ‘unknown’ payment.”¹³

Improper payments are often classified based on whether or not they result in monetary loss to the government, as seen in Figure 2. Monetary loss happens when payments are made to the wrong recipient or in the wrong amount (over-payment). Agencies often prioritize preventing improper payments that result in monetary loss.

Improper payments that do not result in monetary loss include under-payments and payments that are made to the right recipient for the right amount but which failed to follow applicable statute or regulation. This latter type is called a “technically improper

13. Office of Management and Budget. M-21-19, Appendix C to Circular No. A-123, Requirements for Payment Integrity Improvement (March 5, 2021). Retrieved from <https://www.whitehouse.gov/wp-content/uploads/2021/03/M-21-19.pdf>

payment;¹⁴ it could happen, for instance, when the person authorizing the payment did not have the legal authority needed from the contracting officer to authorize the services. Finally, there are improper payments where it is “unknown” whether they are under- or over-payments. Any of the types of improper payments shown in Figure 2 can potentially be addressed with a behavioral insights approach. This is also potentially true for unknown payments, although to be concise, the playbook generally refers only to “improper payments.”

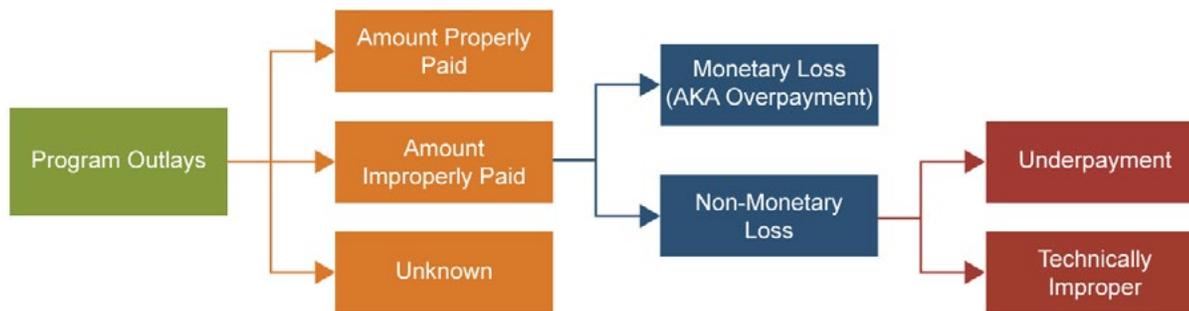


Figure 2. Categories for types of improper payments. Source: Office of Management and Budget. M-21-19, Appendix C to Circular No. A-123, Requirements for Payment Integrity Improvement (March 5, 2021). Retrieved from <https://www.whitehouse.gov/wp-content/uploads/2021/03/M-21-19.pdf>

Separate from the categories shown in Figure 2, there are other distinctions to make about improper payments.

- Result from intentional fraud versus unintentional error
- Result from federal offices or third-party partners
- Result from actions by payors or payees

The first of these distinctions is very relevant to determining whether the improper payment is a good fit to address with a behavioral insights approach. Behavioral insights are an appropriate way to address unintentional error, but generally not effective for addressing intentional fraud. The principles in this playbook aren’t designed to catch or deter sophisticated fraudsters. Instead, they’re meant to make it easier for people to act on their (good, or at least neutral) intentions.

Behavioral insights are an appropriate way to address unintentional error, but generally not effective for addressing intentional fraud.

The second distinction is not particularly relevant to determining whether the improper payment is a good fit for behavioral insights, although it does affect who and how you would apply that approach. Improper payments can result from the behavior of federal employees, state employees, contractors, and others. To make changes following a behavioral

14. United States of America. “PaymentAccuracy.gov.” Accessed July 1, 2021.

insights approach, one needs a way to make contact with these employees, such as through training, emails, or form instructions.

The third distinction is again one that mainly affects who and how would apply the behavioral insights approach, rather than determining whether or not it is appropriate. Just as program staff can make mistakes that lead to improper payments, so can payment recipients. Maybe someone receiving a means-tested benefit doesn't give an agency information about their earnings, and the agency has no other access to this information. As long as there is a way to make contact with the payment recipients, such as through payment processes or sending communications, these improper payments can also be addressed with a behavioral insights approach.

Finally, it may be useful to think about how behavioral insights may relate to the root causes and cause categories developed by the Office of Management and Budget. You can read more about them in [Section 6.3](#).

1.1.2

How do behavioral insights relate to other approaches?

The behavioral insights approach is one way of identifying and evaluating strategies to mitigate improper payments. Other mitigation strategies include using technology to automate the interface between financial and award management systems, and using predictive analytics to automatically reject payments with particular characteristics.¹⁵

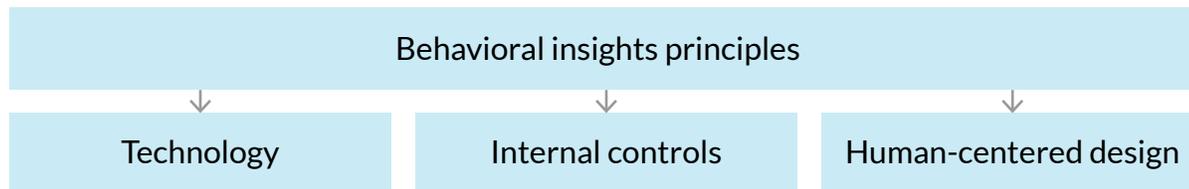
Sometimes behavioral insights principles can be used in combination with this sort of technology, as shown in a project by a state unemployment insurance program. First, researchers used machine learning techniques to identify individuals at high risk of not disclosing earnings in their unemployment claims. Then, these individuals were sent different messages about reporting earnings, designed based on behavioral insights principles. Using machine learning to pick which individuals to target allowed the messages to be sent only to individuals at high risk of not disclosing, and avoided introducing additional messaging for individuals at lower risk.¹⁶

In addition to predictive analytics, many government programs have internal controls to catch common situations that would otherwise become improper payments. Behavioral insights may work in combination with these approaches too, as a way to improve training (see [Section 2.9](#) on Boosts), to make sure that incentives are aligned (see [Section 2.5](#) on Consequences), or even to ensure internal controls are deployed to the situations where they are most effective.

15. Office of Management and Budget. M-21-19, Appendix C to Circular No. A-123, Requirements for Payment Integrity Improvement (March 5, 2021). Retrieved from <https://www.whitehouse.gov/wp-content/uploads/2021/03/M-21-19.pdf>

16. Oliver Hauser, Michael Greene, Katy DeCelles, Michael Norton, and Francesca Gino. "Minority Report: A Big Data Approach to Organizational Attempts at Detering Unethical Behavior." *Academy of Management Global Proceedings* (2018): 125.

The behavioral insights approach also has a lot in common with human-centered design, as both are ways to address barriers and improve customer experiences.¹⁷ Human-centered design generally starts by exploring people’s needs and using an in-depth understanding of their experiences to craft solutions. This playbook suggests a similar approach to applying behavioral insights; rather than deploying one principle in all situations (e.g., sending letters that reference social norms), first try to understand the barriers people are facing, and use that understanding to identify appropriate principles to apply.



1.2

How to use this playbook

What programs should use this playbook?

This playbook is for staff at government agencies that design payment processes and disburse payments. Most of these programs have some amount of improper or unknown payments. Not all improper payments are caused by fraud or represent a monetary loss to the government. The federal government has a goal to demonstrate good stewardship of taxpayer dollars by preventing improper payments, reducing monetary loss, and making payments correct the first time.¹⁸

Programs that are classified as “susceptible to significant improper payments” and which have improper payment rates higher than the compliance threshold need to produce corrective action plans, and behavioral insights can contribute to those plans.¹⁹ But even if an agency or program has only a small amount of improper or “unknown” payments, and is not required to formally report corrective actions, behavioral insights may be a way to reduce them, increasing payment integrity and potentially improving experiences for payors and payees.

17. Michael Hallsworth and Elspeth Kirkman. The future of behavioral insights demands human-centered design. Behavioral Scientist (September 14, 2020. Retrieved from <https://behavioralscientist.org/the-future-of-behavioral-insights-demands-human-centered-design/>

18. <https://www.cfo.gov/payment-integrity/>

19. “The Corrective Action Plan is a combination of both mitigation strategies and corrective actions aimed at reducing the likelihood of an IP and/or a UP occurring during the payment process.” p. 7, Office of Management and Budget. M-21-19, Appendix C to Circular No. A-123, Requirements for Payment Integrity Improvement (March 5, 2021). Retrieved from <https://www.whitehouse.gov/wp-content/uploads/2021/03/M-21-19.pdf>

Who should use this playbook?

This playbook is for staff new to behavioral science approaches as well as more experienced users. Staff from the Chief Financial Officer's office and who work in Risk Management roles, who are directly concerned with payment integrity, can use the playbook for new ideas and a fresh perspective. Frontline program managers have a key role in monitoring internal controls and addressing challenges, and the playbook is meant for them too.

When to use this playbook?

You'll get the best results if you use this playbook regularly and build this conversation into regular business practices. Using this playbook before sending out communications or investing in new systems or contracts is a good time to identify ways that behavioral insights can be applied to improve payment accuracy.

Another good time to refer to this playbook is after annual financial reports, audits, or risk assessments have been conducted and root causes of error have been identified. Those reports discuss where and when improper payments have occurred, and this playbook gives you a lens to think about strategies that address the underlying behavior.

The playbook is divided into sections that can be read separately at different times. For instance:

- Individual staff may want to look at the case studies ([Section 5](#)) or the boxes labeled *Behavioral Insights in Practice* for inspiration.
- A larger group might want to go through the steps in [Section 4](#), using blank worksheets from [Section 6.1](#). If so, have relevant reports (e.g. annual financial reports, audits, root cause analyses) readily available, but generally no other prep work is required.

- Regularly** to build this conversation into regular business practices.
- Before** sending out communications or investing in new systems or contracts.
- After** annual financial reports, audits, or risk assessments have been conducted and root causes of error have been identified.

How to use the playbook most effectively?

When working through the steps in [Section 4](#), it is best to include employees from a mix of roles. Involving the person designated as responsible for improper payments ensures that the agency is able to support and implement actions that are suggested by the playbook. It can be really useful to be able to look at data to see things like how

many submissions are started but abandoned, and is there a common drop-off point for those that are abandoned? A program data expert can help the group answer these questions. Including an evaluation and research expert helps the group think through when and how effects of changes can be measured. Finally, program staff who talk directly with clients or contractors, such as customer experience staff, have valuable feedback about the experiences these people face. Including them helps others understand the key behaviors and barriers that contribute to improper payments at the agency or program. Depending on your intervention ideas and program needs, it may make sense to loop in representatives from additional roles, such as grants and acquisition personnel, financial managers, program integrity experts, and internal controls experts.

This playbook will be most effective if you set aside assumptions you have about behavioral insights. Sometimes preconceived ideas like “behavioral insights means using pop-up messages” or “behavioral insights involve oversight and managing people’s choices” get in the way of finding useful and creative ways to approach the behavior that contributes to improper payments.

1.2.1

What can users expect?

The playbook refers to the changes that can be implemented following a behavioral insights approach as “interventions.” The behavioral insights approach is often used to design low-cost interventions, like sending emails or text messages, building in system prompts, or changing the way forms look. Over the past several years, when these interventions have been applied by government agencies, the average effect has been about 7.5%, or one and a half percentage points.²⁰ For example, the changes might increase the percentage of unemployment filers who report earnings from 20% to 21.5%.

More intensive changes, like passing new legislation or revising the content of forms (as opposed to just making small changes to how the form looks), may have the promise of achieving larger effects, but program staff may not be able to make these sorts of changes themselves. Other steps, like redesigning software or implementing performance-based contract administration, also can have the potential to achieve larger effects than behavioral insights, but may require more time or money than the agency or program is able to allocate. Behavioral insights can be used when it isn’t feasible to make more intensive changes, or when those changes have already been tried and you want to make further improvements.



Behavioral insights can be used when it isn’t feasible to make more intensive changes, or when those changes have already been tried and you want to make further improvements.

20. Stefano DellaVigna and Elizabeth Linos. RCTs to Scale: Comprehensive Evidence from Two Nudge Units. *NBER Working Paper* (2020). No. 27594.

When a small change saves money, and these savings accrue across many payors or payees, behavioral insights interventions can be highly cost effective. For example, in 2019 OES tested variations of a letter to encourage Supplemental Security Income (SSI) benefit recipients to report any changes to their earnings in a more accurate and timely manner. Unreported earnings are a major cause of improper payments in SSI, because they lead to overpayments. Based on the increase in the amount of countable income reported, **a cost-benefit analysis suggests that the letters generated a reduction in overpayments of approximately \$5.91 per \$1 spent by the Social Security Administration.**²¹

However, do be sure to consider any risks associated with the ideas you consider implementing. M-21-20, a memorandum related to Effective Implementation of the American Rescue Plan Act and Stewardship of the Taxpayer Resources, says that while working to ensure payment integrity:



“...agencies must balance financial management and programmatic goals, including speed of delivery, burden on beneficiaries, and other program attributes that impact racial equity and support for underserved communities, when considering changes to internal controls. Agencies should advance racial equity by administering programs fairly and equitably.”

Risks associated with making changes to address improper payments include the chance that a change will backfire (will increase instead of decrease the improper payments you’re targeting), as well as the possibility of negative effects on other outcomes, like discouraging people from applying for benefits they are eligible for. (See [Section 3](#) for more on this idea.) Be sure to carefully consider whether any risks or costs of changes you make might fall disproportionately on people from some racial groups or other underserved communities.

21. General Administration Service: Office of Evaluation Sciences. “Encouraging Social Security Income Recipients to Self-Report Wage Changes” (2019). Retrieved from: <https://oes.gsa.gov/projects/ssi-wage-reporting/>

2. Descriptions of Behavioral Insights Principles



The behavioral insights approach means a focus on how people actually make decisions and what influences their behavior. There are a lot of scientific disciplines that study these topics. Behavioral insights draw on the knowledge from those disciplines, combined with observations of how the people involved with a specific program are behaving.

This approach is different from thinking of humans as strictly rational actors who carefully identify and weigh costs and benefits of various options before making a decision. Instead, people have more decisions and information than they can consciously and carefully deliberate on. So, many human decisions and behavior are made without careful conscious deliberation.

These decisions and actions are sometimes called automatic, and they are strongly influenced by the environment or context. Elements like “what options are presented” and “what others are doing” have a big influence on the choices people make. These are the kinds of elements the behavioral insights approach is trying to leverage.

The rest of this section describes principles that are general and can be applied in many situations beyond improper payments. It includes principles that rely on the idea of limited human time and attention (like the example above and a primary focus of some behavioral science practitioners), as well as principles like consequences and boosts that do not necessarily rest on limited time and attention). As much as possible, the examples provided show how they could be applied specifically to address payment integrity.



Elements like “what options are presented” and “what others are doing” have a big influence on the choices people make.

The nine principles described in this section are:

Behavioral insights principle	1-sentence summary	Example
Reminders	Reminders spotlight compliance.	Text message about an upcoming deadline.
Easier	Reduce hassles to facilitate easier compliance.	Send out blank forms rather than making people request them.
Simpler	Simpler information facilitates desired action.	Reduce length and reading level of letters and instructions.
Attention	Information that stands out gets more attention.	Use eye-catching color on a key message.
Consequences	People do things that have rewards, and avoid doing things that have negative consequences.	Give a discount to on-time filers and a penalty fee to late filers.
Norms	People often want to do what's normal, or better.	Truthfully inform payment processors that 95% of their peers achieve the target error rate.
Messenger	Choosing the right messenger can improve compliance.	Have an authority figure record a short video to introduce new payment guidelines.
Planning	Planning where, when, and how to act makes people more likely to follow through.	Include a prompt to plan where and when to file taxes when 1099s are sent out.
Boosts	Support and training can boost the ability to make good decisions in difficult situations.	Provide a rule of thumb (e.g. "X% of your monthly take-home pay") as a suggested tax prepayment.

2.1

Reminders spotlight compliance

People are busy, and they forget things. Even though few people would disagree that reminders can be helpful, they're often overlooked.

Reminders can take many forms, for instance:

- Key actions that administrators sometimes overlook (for instance, in a rush to get emergency funds to people who need them) could be listed on a sign and kept on top of the desk for easy reference.
- Steps that need to be done repeatedly can be presented as a checklist, which people can be encouraged to run through any time they start a given task.²²
- If paperwork needs to be submitted, a text or email reminder can be sent as the deadline is approaching.

Reminders can be made especially effective by combining them with specific types of information or message framing. For example:

- When people are just getting started, emphasizing the progress they've already made ("You're 20% done!") can boost their motivation to keep going.²³
- More skilled and committed audiences, like experienced employees, can instead be reminded about the work that is left ("You have 40% left to go!") to motivate them to finish.²⁴
- Sending a reminder along with a headstart on the progress can make the work seem less daunting. For instance: "We've completed the first page for you."
- Tasks can be linked to specific sights, smells, or sounds that act as "triggers."²⁵

Sending many reminders may not work well, as people may start to tune them out. Make sure that any reminders you give are as simple to understand (e.g., large text, simple language) and as easy to act on as possible (e.g., use a very short web address for the page people need to visit).

22. Atul Gawande. *The Checklist Manifesto: How to Get Things Right* (New York: Picador, 2010).

23. Ayelet Fishbach, Tal Eyal, and Stacey R. Finkelstein. "How positive and negative feedback motivate goal pursuit." *Social and Personality Psychology Compass* 4, no. 8 (2010): 517-530.

24. Ayelet Fishbach, Tal Eyal, and Stacey R. Finkelstein. "How positive and negative feedback motivate goal pursuit." *Social and Personality Psychology Compass* 4, no. 8 (2010): 517-530.

25. Jonah Berger. *Contagious: Why things catch on*. (New York: Simon and Schuster, 2016).



Caution: Keep in mind that bringing attention to a specific action can take attention away from other things, which are potentially more important. For example, reminders about tax prepayment opportunities might distract people from making vehicle registrations or insurance renewals.

Behavioral Insights in Practice

About 20,000 taxpayers with payments due were randomly assigned to receive a reminder from the Colombian National Tax Agency in the form of a letter, an email, or a personal visit by a tax inspector, or to receive no reminder. All of the reminders increased the probability of on-time tax payment. Taxpayers who were sent a letter were about 4 percentage points more likely to pay on time. Those who were sent an email or assigned to have a personal visit were about 14 percentage points more likely to pay on time.²⁶

2.2

Reduce hassles to facilitate easier compliance

Small complications and hassles can stop people from doing something they would otherwise do. Making things easier to do can help people follow through on their good intentions.

Maybe some taxpayers are not filling out a particular form because the form is hard to find on the agency website; can you make it easier to find? If they're not completing the form because it's too time-consuming, can you find ways to make it easier to complete? Can you pre-populate the form with certain information? Can you give drop-down menus with common response options? Can you make the whole form fit on one page so that people don't have to scroll? Anything you can do to reduce the "hassle factor" should boost compliance with requests and instructions.

Making things easier to do can help people follow through on their good intentions.

For example, the United Kingdom's Behavioral Insights Team ran a series of studies on tax collection in the UK that tested ways to make it easier to pay. Changing a letter so that it sent recipients straight to the specific form they needed to complete, instead of

26. Daniel Ortega and Carlos Scartascini. "Don't Blame the Messenger. The Delivery method of a message matters." *Journal of Economic Behavior & Organization* 170 (2020): 286-300.

to the web page that included the form, increased response rates from 19% to 23%.²⁷

One powerful way to make things easier is using the power of **defaults**. A default option describes what will happen if people take no action. A default is in some ways the ultimate simplification, because it makes “doing nothing” achieve the desired outcome.

A well-known example of a default is organ donation: if we start with the assumption that everyone is willing to be an organ donor unless they opt out, then many more people will be registered donors, compared to when they need to take action to register.²⁸ Consider what your agency’s default process is, and whether it can be changed to reduce improper payments.

Defaults are relevant when thinking about potential trade-offs between payment integrity and program access. For example, many benefit programs require that beneficiaries periodically re-apply and demonstrate eligibility. The default option, for those who don’t re-apply, is being dropped from the program. The periodic demonstration of eligibility, which is typically intended to prevent improper payments, may decrease program access for eligible beneficiaries. If beneficiaries who are losing benefits are still eligible to the extent possible under the law, a program might decide to change the default to “continued enrollment” to improve access to benefits.

Remember that defaults can be changed and processes can be made easier for both payors and payees. Which one you target should be based on where the behaviors that are leading to improper payments are occurring.

Behavioral Insights in Practice

A concrete example of potential trade-offs between payment integrity and program access comes from research by the California Policy Lab, which found “that paperwork burdens are causing otherwise eligible households to drop out of CalFresh [California’s version of the Supplemental Nutrition Assistance Program (SNAP), commonly known as food stamps]. Using a conservative estimate, researchers found that more than half (55%) of households leaving the CalFresh program are still likely eligible for the program when they leave. The California Policy Lab also found that people are six times more likely to leave CalFresh in the month that they have to recertify their eligibility.”²⁹

27. Owain Service, Michael Hallsworth, David Halpern, Felicity Algate, Rory Gallagher, Sam Nguyen, Simon Ruda, and Michael Sanders. “EAST Four simple ways to apply behavioural insights.” *The Behavioural Insights Team Publication* (Box 1.2) (2015). Retrieved from <https://www.bi.team/publications/east-four-simple-ways-to-apply-behavioural-insights/>

28. Richard H. Thaler and Cass R. Sunstein. Chapter 11: “How to Increase Organ Donations,” in *Nudge: Improving decisions about health, wealth, and happiness*. (New York: Penguin, 2009).

29. Matthew Unrath. “Targeting, Screening, and Retention: Evidence from California’s Food Stamps Program” (2021). Retrieved from <https://www.capolicylab.org/wp-content/uploads/2021/02/Cal-Fresh-Working-Paper.pdf>



Caution: One reason defaults achieve such large effects is because they imply that the default option is the optimal one. For example, if the default contribution rate to a retirement plan is 3%, many people will assume (perhaps incorrectly) that this contribution level will adequately fund their retirement. It is important to think carefully before setting a default option and consult policy and legal stakeholders.

2.3

Simpler information facilitates desired action

Related to making tasks easy to do, it is also worth checking that information you're conveying is simple to understand, by limiting, grouping, or streamlining the information people have to process to make decisions. Use less complex language to explain what people need to do; use fewer words; use bullet points; add graphics; increase the font size; etc.

Being overloaded in information not only makes it hard to understand a message, it can lead to procrastination. For example, a long letter full of complex information may feel overwhelming or intimidating, so the recipient puts it aside to look at later. You may be able to prevent this procrastination by making the essential information simple to understand. One way to do this is by careful copy-editing to reduce the amount of information.

Also consider:

- **Bring essential information up front:** Moving required legal language or minor points that only apply to a few recipients to a separate section of a communication (e.g. the end).
- **Clear checklist:** Use simple language to list the requirements for reporting a specific change, to reduce the burden of searching for the relevant information/forms.
- **Provide an anchor:** If there are a lot of options, people might be overwhelmed or have trouble deciding which one to choose. You can “anchor” them by suggesting or highlighting one specific option to make the decision easier.

Some of these ways to make information simple rely on ensuring that key information captures attention, which is addressed in more detail in [Section 2.4](#).



Caution: Keep in mind that what is easy and simple to understand for one group of people can be difficult for another. An acronym is easy for insiders to understand (for instance, the playbook author team refers to their group as OES) and makes text shorter, but can be confusing for others. Similarly, making a paper form into an online one and using skip logic to present fewer questions may make this form easier for many people. But if the online form isn't accessible from a mobile phone, then people who lack access to a computer with a stable internet connection may find it more complicated to complete than it was before. Even if you think you've made things easier to do or simpler to understand, try to get feedback from program users to double check that the changes have the effect you intend.

Behavioral Insights in Practice

In a 2016 collaboration, OES and USDA simplified the letter that was sent to households requesting information to verify eligibility for free or reduced-price school meals. Prior research indicated that some of the households selected for verification did not respond because they misunderstood what they were being asked to do.³⁰ To make the request for verification clearer and easier to understand, the research team redesigned the request letter. Among other changes, the redesigned letter used simpler language and included a visual summary of the materials that the household was required to submit. OES analyses estimated that the new letters increased responses to verification requests by 2.1%.³¹ This increase was not statistically significant and, thus, could have been due to chance. Still, the project describes an intervention that could be applied in other contexts.

30. <https://www.fns.usda.gov/cn/verification-toolkit>

31. General Services Administration: Office of Evaluation Sciences. "Decreasing Non-responses to NSLP Income Verification Requests" (2016). Retrieved from <https://oes.gsa.gov/projects/nslp-income-verification/>

2.4

Information that stands out gets more attention

Human behavior is driven by what people pay attention to, which is generally those things that are particularly prominent or noticeable. Standing out and attracting attention depends on the context. For instance, a black and white image attracts attention in a color magazine, and a color image stands out in a black-and-white magazine. In both cases, the image stands out by being different and unexpected in comparison to its surrounding context.

A key factor that influences attention is what seems relevant to an individual. For instance, the “cocktail party effect” describes how people notice their name being spoken by someone else across a noisy room.³² This ability to attract attention is one rationale behind personalizing messages, like including someone’s name or other personal details in a communication to attract attention and increase engagement.

Ways to attract attention include:

- Personalize the communication (e.g., begin with the recipient’s name)
- Present messages in unusual or unexpected ways (e.g., add a message to the outside of an envelope)
- Present important messages in a time and place where attention is more readily available (e.g., communicate with accountants outside of tax season)
- Add more space around key information so it stands out
- Use bold text or colors to draw attention to key information

Because changes stop attracting attention over time, it can make sense to try different variations of a message or design. This was done with messages presented to individuals who were identified as being at high risk of not disclosing earnings in their unemployment claims. One group of individuals was sent different messages over time, and their earnings reports were compared to those reported by individuals who received the same message repeatedly.³³

However, if a long time passes between messages, they don’t necessarily need to be changed to maintain attention. A message about tax compliance had a similar effect the second year it was sent to organizations,³⁴ for instance.

32. Irwin Pollack and J.M. Pickett. “Cocktail Party Effect.” *The Journal of the Acoustical Society of America* 29(11) (1957).

33. Oliver Hauser, Michael Greene, Katy DeCelles, Michael Norton, and Francesca Gino. “Minority Report: A Big Data Approach to Organizational Attempts at Deterring Unethical Behavior.” *Academy of Management Global Proceedings* (2018): 125.

34. Nicole Robitaille, Julian House, and Nina Mazar. “Effectiveness of Planning Prompts on Organizations’ Likelihood to File Their Overdue Taxes: A Multi-Wave Field Experiment.” *Management Science* (2020).



Caution: Keep in mind that attracting attention generally relies on being different and unexpected. People quickly get used to new formats, to colors, to information on an envelope, and to other changes, and so these modifications will stop attracting attention over time. Also, be careful to use fonts and colors as an accent and not as the only clue to what's important, so that messages aren't needlessly difficult for impaired users (in line with 508 compliance).

Behavioral Insights in Practice

Color and reformatting was key in a tax amnesty notice redesign tested in Santa Fe, Argentina, in 2017. In a group of about 54,000 indebted taxpayers, the redesigned letter (Figure 3) produced an increase of about 1 percentage point in the likelihood of joining a payment plan.³⁵

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CONTRIBUYENTE

CONTRIBUYENTE

Plan	Cant. Més. de Cuotas	Anticipo	Interés por Asociación	Interés por mora	Ahorro Interés por mora
A	6	-	0%	3%	-
B	12	20%	2%	1%	XXXX
C	18	-	2%	1,5%	XXXX
D	24	-	2%	2%	XXXX

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Pago **CONTADO** Vencimiento **xx/xx/xxxx** Importe **\$XXX.XXX,XX**

Figure 3. Original (left) and redesigned (right) tax amnesty notices used in Santa Fe, Argentina. The redesigned notice used color and formatting to draw recipients' attention to key elements of the message.

35. Edgar Castro and Carlos Scartascini. "Imperfect Attention in Public Policy: A Field Experiment during a Tax Amnesty in Argentina." *Inter-American Development Bank Working Paper* (2019). See also <https://www.bhub.org/project/designing-for-limited-attention-during-tax-amnesty-times/>

Behavioral Insights in Practice

The Maxwell X Lab and the City of Syracuse collaborated in 2018 to redesign the courtesy notice sent to those who had overdue property tax bills. One-third of the notices were sent with a personalized handwritten note on the outside of the envelope. Property owners who were sent this type of envelope were 1.8 percentage points more likely to pay their bill than property owners who were sent the redesigned notice in a standard envelope.³⁶

2.5

People do things that have rewards, and avoid doing things that have negative consequences

People are generally inclined to do things that have positive consequences for themselves or others they care about, and to avoid doing things that have negative consequences. Keep in mind that these consequences can take a huge variety of different forms, and depend on what the target audience cares about.

Positive consequences can include saving money, getting respect or recognition, making others happy, etc. Negative consequences can include losing something that's valued like some freedom or access, financial costs, shame, etc. Interventions that use consequences can introduce new ones like new rewards for those who do something, or fines for those who don't. Interventions can also just remind people about consequences that already exist, perhaps trying to make them seem more important or more meaningful, or just making them more salient.

Remember that behavioral insights interventions generally aren't effective at deterring sophisticated or determined fraud ([Section 1.1.1](#)). However, potential offenders often do not know about the legal penalties that exist,³⁷ so raising awareness of consequences or framing the penalties in particular ways can change the behavior of those people who do generally intend to follow the rules.

Negative consequences are probably more common than positive ones when it comes to improper payments. For example, the IRS sends a letter to return preparers who may not have met due diligence requirements on returns and claims for refund filed for their clients. The letter highlights negative consequences for the preparer ("You may be penalized"; "The penalty is \$XXX for per failure") and their client ("We may also audit your clients which could prevent them from claiming the credits") that could

36. Maxwell X Lab. "Overdue property tax notifications: City of Syracuse." Syracuse University Report (2018). https://www.maxwell.syr.edu/uploadedFiles/XLab/Syracuse_Taxes_Results.pdf

37. Paul H. Robinson and John M. Darley. "Does criminal law deter? A behavioural science investigation." *Oxford Journal of Legal Studies* 24, no. 2 (2004): 173-205.

occur if they fail to meet these requirements.³⁸ The letter reminds return preparers that these consequences exist and may make them seem more important.

Financial consequences are a common way to introduce both rewards (e.g., a discount for early payment) and punishments (e.g., a fine for violation). And these consequences can be effective. Letters sent to late taxpayers in Philadelphia were most effective when they stressed the likely economic sanctions that would result from continued tardy payment.³⁹ These letters cost \$1 to send and returned on average \$65 extra revenue, although there was no lasting effect the following year.

Consequences need not be financial; feelings can also be consequences. One way to emphasize non-monetary consequences is framing an action as moral, fair, or a way to help others, such as “When everyone pays their part, we can maintain this resource for the community.” People generally want to be moral, fair, and helpful, so reminding them that regulations and guidelines exist to help others, and presenting compliance as consistent with being a good and moral person, can use feelings to reinforce compliance.

Consequences need not be financial; feelings can also be consequences.

People generally give more weight to things that are happening immediately or in the near future than to things that will happen later on. Because of this “present bias,” consequences are especially powerful when they occur in the present. Consequences are also generally more effective when they are guaranteed rather than just a possibility. But as seen in the example of Santa Fe, Argentina in the Behavioral Insights in Practice box below, even uncertain rewards (a lottery) that come after a time delay can have an effect.



Caution: Keep in mind that financial consequences can sometimes seem manipulative and may backfire. If you are trying to motivate people to do something, making the task meaningful (perhaps by helping them see the positive effects it has, or by giving them more autonomy in their work) can sometimes work better than offering to pay them to do it. An intermediate approach is to give non-financial rewards like certificates or recognition. However, even these kinds of awards sometimes backfire, presumably by showing that the rewarded behavior is not actually typical, and implying that people would need to be rewarded to get them to do it.

38. IRS. “Reaching out to Paid Preparers” (n.d.). Retrieved from <https://www.etc.irs.gov/tax-preparer-toolkit/preparer-compliance-focused-and-tiered/reaching-out-to-preparers/reaching-out>

39. Michael Chirico, Robert Inman, Charles Loeffler, John MacDonald, and Holger Sieg. “Deterring property tax delinquency in Philadelphia: An experimental evaluation of nudge strategies.” *National Tax Journal* 72(3) (2019): 479-506.

Behavioral Insights in Practice

The municipal government of Santa Fe, Argentina organized a lottery in 2009 that entitled winners to the full construction or renovation of the sidewalk in front of their homes. The city government randomly selected 400 individuals among more than 72,000 taxpayers who had complied with the payment of their property tax. They found that the award of a sidewalk and the recognition as a “good taxpayer” increased the likelihood that winners (and neighbors of winners) paid their tax obligations on time (by about 3.1 percentage points).⁴⁰

Behavioral Insights in Practice

One version of a letter sent by the Minnesota Department of Revenue in 1995 described how income tax dollars were allocated on state services, concluding “So when taxpayers do not pay what they owe, the entire community suffers.” Taxpayers who were sent this letter paid, on average, \$220 more than those sent a letter without the community services information (although the difference was not statistically significant).⁴¹

2.6

People often want to do what’s normal, or better

The “thing that most other people are doing” is referred to as a descriptive norm in social and behavioral sciences (“it describes the thing that’s normal”).⁴² People are inclined to follow norms, both because if many other people are doing something, it’s probably a good idea, and because going against the norm can open you up to criticism. Therefore, telling people how common a certain behavior is (assuming it IS common) can make people more inclined to do that behavior.

40. Paul E. Carrillo, Edgar Castro, and Carlos G. Scartascini. “Do Rewards Work?: Evidence from the Randomization of Public Works.” IDB Working Paper No. IDB-WP-794 (2017).

41. Marsha Blumenthal, Charles Christian, Joel Slemrod, and Matthew G. Smith. “Do normative appeals affect tax compliance? Evidence from a controlled experiment in Minnesota.” *National Tax Journal* 54 (2001): 125-138.

42. Robert G. Cialdini, Carl A. Kallgren, and Raymond R. Reno. “A Focus Theory of Normative Conduct: A Theoretical Refinement and Reevaluation of the Role of Norms in Human Behavior.” *Advances in Experimental Social Psychology* 24 (1991): 201-234.

One example of applying norms to improper payments comes from the project by the state unemployment insurance program discussed in earlier sections.⁴³ They used machine learning techniques to identify individuals at high risk of not disclosing earnings in their unemployment claims. These individuals were then sent different messages, designed based on behavioral insights principles. Those pop-up messages included ones that read “98 [or 99] out of 100 people in [your county] report their earnings accurately. If you worked between [Reporting Period], please ensure you report those earnings.” This message worked better than saying that 9 out of 10 people report accurately. See the Case Study in [Section 5.1](#) for additional examples of norm messages.

While norm messages encourage people to do what others are doing, in other situations it makes more sense to encourage them to do better. Employers take this approach when they recognize the top performers in a group or ask lower performers to improve their metrics (e.g., to process X applications per hour or to achieve average call time of X minutes).

Keep in mind that peer comparisons and norms work especially well if they refer to people who are relevant to the target person. This can be because they are similar in demographic characteristics (prescribers in the same state, or other people your age living in your neighborhood), for instance.



Caution: If the behavior is NOT actually very common, using norms can backfire. (Imagine a person reading the message and thinking “wow, most people aren’t doing this, why should I?”) Even when they don’t backfire, several studies have found weak or no effects of norm messages. Like all the principles discussed here, this approach isn’t guaranteed to work every time!

43. Oliver Hauser, Michael Greene, Katy DeCelles, Michael Norton, and Francesca Gino. “Minority Report: A Big Data Approach to Organizational Attempts at Deterring Unethical Behavior.” *Academy of Management Global Proceedings* (2018): 125.

Behavioral Insights in Practice

Norms and peer comparisons were used in a project where OES collaborated with the Center for Program Integrity (CPI) at the Centers for Medicare and Medicaid Services (CMS) to improve the value and safety of prescribing medications that are often over-prescribed in Medicare Part D. In one instance, OES and CPI identified the top 5% of high volume prescribers. Then, they randomly assigned half of these prescribers to be sent a series of letters explaining that their prescribing was extremely high relative to their within-state peers and was under review.

Prescribers who were sent the series of letters with peer comparisons prescribed 11.1% less of the targeted medication in the 9 months following the intervention than prescribers who were sent a placebo letter. Considering the cost to Medicare of medications, and concerns about over-prescribing, low-cost interventions like this one offer the potential to reduce spending in Medicare while raising the quality of health care that beneficiaries receive.⁴⁴

However, it is worth noting that these letters also stated “you have been flagged as a markedly unusual prescriber, subject to review by the Center for Program Integrity” and noted “Abusive prescribing can lead to extensive audits and even revocation of Medicare billing privileges.” An earlier project which only used peer comparisons without this punitive language showed no impact on prescribing,⁴⁵ in line with the Caution in this section.

2.7 Choosing the right messenger can improve compliance

Some people are especially successful at getting others to comply. There are several elements that can make a “messenger” (the person sharing a message, such as a message about compliance with payment guidance) effective:

- **Authority:** people are generally more likely to go along with what they’re asked (or told) to do by people in authority. This doesn’t necessarily have to be a direct supervisor; it could be an elected official, a teacher, a law enforcement officer, etc.
- **Expertise:** people are more likely to comply with those who have the relevant expertise; you take health advice from a doctor and tax advice from an accountant. If you’re asking people to do something, consider having the request come from someone who is an expert in the field.

44. General Services Administration: Office of Evaluation Sciences. Reducing overprescribing of quetiapine in Medicare Part D (2021). <https://oes.gsa.gov/projects/quetiapine-prescribing/>

45. General Services Administration: Office of Evaluation Sciences. Reducing inappropriate prescribing of Schedule II substances in Medicare Part D (2015). <https://oes.gsa.gov/projects/reducing-inappropriate-prescribing/>

- **Similarity:** people are inclined to comply with “someone like me.” Similarity can be in terms of gender, race, ethnicity, area of the country, interests, hobbies, names, etc. This is the reason why more and more ad campaigns are being tailored to show people from different demographic backgrounds; if the people in the ad don’t seem very much like you, the message probably doesn’t seem very relevant to you.
- **Liking:** people are more inclined to do what they’re asked to do by someone they like. This could be a friend or family member, a boss or coworker they have a good relationship with, a popular actor or performer, or someone who’s just given a compliment or done a favor.

Finding the right messenger can be tricky. Sometimes the messenger with lots of authority is not particularly liked, or the messenger who is similar to the audience lacks expertise. Although there are research frameworks that suggest which dimension of a messenger is most important in which type of situation, choosing one often involves a good deal of educated guesswork.



Caution: Different audience segments may have different preferred messengers. If possible, conduct user research with members of key segments to identify these preferences. You might choose the messenger who appeals to the biggest segment, or develop different messaging for different segments.

Behavioral Insights in Practice

A research study with two large Philippine microlenders used text messages to remind borrowers about weekly repayments. Some of the messages mentioned the name of the loan officer. Although there was no evidence that messages on average improved repayment rates, including the loan officer’s name reduced the likelihood of unpaid loans by 5.5 percentage points. This effect was only observed for borrowers whose loans were serviced by that specific loan officer, suggesting that the effect may be due in part to triggering feelings of liking or obligation in light of the personal relationships between borrowers and loan officers.⁴⁶

46. Dean Karlan, Melanie Morten, and Jonathan Zinman. “A Personal Touch In Text Messaging Can Improve Microloan Repayment,” *Behavioral Science and Policy* 1 (2) (2016), 25–31.

2.8

Planning where, when, and how to act makes people more likely to follow through

There's a big difference between committing to do something and following through (think of the maxim "actions speak louder than words"). Forgetting is one of the reasons that people don't follow through on good intentions (more on this in [Section 2.1](#)). Sometimes people haven't forgotten to do something, but they procrastinate. For this reason, a deadline (not too far in the future) can be helpful. When time is limited, people may be more likely to act before they forget.⁴⁷

With or without a deadline, people are more likely to follow through on their good intentions when they've identified HOW they're going to do it. For example, Canadian organizations who were late in filing a payroll tax return filed 4-5 days sooner if they were sent a letter with step-by-step instructions about where, when, and how to file.⁴⁸

In many cases people can be prompted to identify their own "how" to act, by asking them to say or write down where, when, and what they will do. That kind of planning not only increases the likelihood that people follow through, it also makes it easier for them, because the hard work of figuring out what exactly to do and when and where to do it is finished. Having thought about the when and where, this situation is easier to recognize when it comes up.⁴⁹



Caution: Planning generally only works when people are already committed to a goal. The prompt to "plan where, when, and how to report your income" probably won't work for someone who has decided not to report their income to the government.

47. Christopher Cox. *The Deadline Effect*. (Simon & Schuster, 2021).

48. Nicole Robitaille, Julian House, and Nina Mazar. "Effectiveness of Planning Prompts on Organizations' Likelihood to File Their Overdue Taxes: A Multi-Wave Field Experiment." *Management Science* (2020).

49. Peter M. Gollwitzer. "Implementation intentions: strong effects of simple plans." *American Psychologist* 54(7) (1999): 493.

Behavioral Insights in Practice

In a project with Accion Texas, a large microlender serving low-income consumers who often lack access to traditional credit channels, the group ideas42 used a planning prompt in a redesigned monthly statement. As seen in Figure 4, the redesigned statement included a highlighted recommended date to check that funds in an account were sufficient to make a repayment and avoid Non-Sufficient Funds fees, along with a Post-it note graphic to help plan deposits.⁵⁰

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Janie Barrera, CEO

This Month's Payment
Due Date: 05/21/2015
If paying by *Automatic Bank Withdrawal*, we suggest you deposit sufficient funds by
Monday, 5/18/2015
Total Amount Due: \$999.99

Payment History
Last Payment Date: 4/22/2013
Last Payment Amount: \$999.99
Balance as of 4/30/13: **\$99999.99**
Total Payment(s) Past Due ☺
\$0.00

For Automatic Bank Withdrawal Payments:
Try this simple tool to help yourself pay on time and avoid fees!

(Detach and return ONLY if you CANNOT pay by Automatic Bank Withdrawal)

NOTE: Unless you are pre-approved by Accion to use methods listed below, please notify Accion at least 7 business days before the Due Date by calling 1-800-215-7373

Loan # 99999
(Include Loan # on your check, money order, or cashier's check)

Due Date: 05/21/2015
Total Amount Due: \$999.99 Amount Enclosed: \$ _____

Payment Method (NO CASH PLEASE)

Check Money Order Cashier's Check
 Online Payment: www.acciontexas.org/make-a-payment

Fill out if there is a change of address: _____

Make My Accion Loan Payment

I will make a deposit at the bank in the amount of \$ _____ on the following date and time:

_____/_____/_____ (Day of Week) (Month/Day) (Time)

Please post on your refrigerator

Figure 4. A monthly statement designed by Ideas42 identified a date to check for sufficient funds, and used the wording on a Post-it note image to prompt statement recipients to make a plan for when, where, and how to act.

50. Ideas42. "Helping Borrowers Make Payments on Time" in *Small Changes, Real Impact: Applying Behavioral Economics in Asset-Building Program* (2015). Retrieved from <http://www.ideas42.org/wp-content/uploads/2015/05/CFED-ideas42-Small-Changes-Real-Impact.pdf>

2.9

Support and training can boost the ability to make good decisions in difficult situations

Many of the principles up to this point qualify as “nudges”⁵¹ in that they try to change decisions and behavior without adding material incentives or changing underlying knowledge, beliefs, or abilities. For example, one could try to increase enrollment in a retirement savings plan by making enrollment the default, simplifying the enrollment process, sharing information about how common enrollment is, or having an authoritative or well-liked messenger suggest enrollment. All of these techniques might increase enrollment without changing the monetary incentive to enroll and without really changing someone’s underlying knowledge about retirement savings or their ability to understand the benefits of saving early in life.

An alternative approach is to try to improve knowledge and ability. This, of course, is the basic rationale for training: if people aren’t doing it right, train them to do it better. But in behavioral science, the emerging work on “boosts” usually focuses instead on less intense and “just in time” approaches rather than traditional training courses.⁵² Coming back to retirement savings, a boost approach might help people connect with their future selves and teach them simple rules of thumb for deciding how much to save at different ages rather than giving them a financial education course.



Boosting can involve redesigning the environment and/or teaching people how to redesign it themselves.

Boosting can involve redesigning the environment and/or teaching people how to redesign it themselves. For instance, rather than prompting people to make a plan (see [Section 2.8](#)) in one specific instance, you could teach them how to make these plans themselves when they encounter relevant situations.

One useful example of a boost is changing the way that statistical information is presented from percentages to natural frequencies so that it can be more easily understood.⁵³ For example, statements like “You have a 30% chance of a side effect from this drug” are hard for people to interpret; saying instead “Three out of every 10 patients have a side effect from this drug” boosts a patient’s ability to use information to make an appropriate decision. Although changing probabilities to natural frequencies has not been tried in an improper payments context (to the authors’ knowledge), this may be a promising approach for the future.

51. Richard H. Thaler and Cass R. Sunstein. *Nudge: Improving decisions about health, wealth, and happiness*. (New York: Penguin, 2009).

52. Ralph Hertwig. “When to consider boosting: some rules for policy-makers.” *Behavioural Public Policy* 1(2) (2017): 143-161.

53. Gerd Gigerenzer. “What are natural frequencies?.” *BMJ* 343 (2011).

3. Considerations when Applying Behavioral Insights Principles



The principles discussed in [Section 2](#) are supported by research and evidence. However, **not every principle will be effective in every situation**. Sometimes a behavioral scientist has misunderstood the relevant barriers and so makes changes that aren't particularly relevant to the situation. Or, a principle is applied in a suboptimal way because of constraints on what's feasible to do. Whatever the reason, because effects are different in different situations, evaluation (building evidence about the impact of specific changes) is typically part of the behavioral science approach. [Section 6.2](#) lists resources that can help you with evaluation.

Because research and evaluation is ongoing, ideas about and evidence supporting promising behavioral insights principles can change over time. One useful example is that of “loss aversion,” or the idea that “losses loom larger than gains” (e.g., the pain of losing \$5 is more intense than the happiness of gaining \$5). There are many, many pieces of research supporting this claim, particularly when making risky decisions. However, there is also emerging research and commentary showing situations in which people are not particularly averse to losses.⁵⁴ And a sensible extension of loss aversion—the idea that messages which emphasize what someone will lose by not acting are more motivating or more persuasive than messages which emphasize what someone will gain by acting—has not generally been supported.⁵⁵ For this reason, you won't find ideas about loss aversion in this playbook. A second example of an intervention with mixed evidence is adding a commitment to provide careful and accurate reporting at the beginning of a self-report form. An influential paper published in 2012 found that signing an honesty pledge at the beginning of a form (instead of at the end) increased honesty⁵⁶, but this paper has been retracted due to questions about the validity of the data.⁵⁷ A subsequent study also did not replicate the original findings.⁵⁸ Other recent research finds that research participants are more honest when they are asked to write out an honesty pledge before and during a self-reporting task.⁵⁹



Because effects are different in different situations, evaluation (building evidence about the impact of specific changes) is typically part of the behavioral science approach.

54. David Gal and Derek D. Rucker. “The loss of loss aversion: Will it loom larger than its gain?” *Journal of Consumer Psychology* 28, no. 3 (2018): 497-516.

55. Daniel J. O’Keefe, and Jakob D. Jensen. “The relative persuasiveness of gain-framed loss-framed messages for encouraging disease prevention behaviors: A meta-analytic review.” *Journal of Health Communication* 12(7) (2007): 623-644.

56. Lisa L. Shu, Nina Mazar, Francesca Gino, Dan Ariely, and Max H. Bazerman. “Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end.” *Proceedings of the National Academy of Sciences* 109, no. 38 (2012): 15197-15200.

57. Retraction for Shu et al., “Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end.” *Proceedings of the National Academy of Sciences* 118, no. 38 (2021): e2115397118

58. Ariella S. Kristal, Ashley V. Whillans, Max H. Bazerman, Francesca Gino, Lisa L. Shu, Nina Mazar, and Dan Ariely. “Signing at the beginning versus at the end does not decrease dishonesty.” *Proceedings of the National Academy of Sciences* 117 (13) (2020): 7103-7107.

59. Eyal Peer, and Yuval Feldman. 2021. “Honesty pledges for the behaviorally-based regulation of dishonesty.” *Journal of European Public Policy* (2021): 1-21.

A 2015 OES project had the objective of reducing financial self-reporting errors using a redesigned data-entry form. Federal vendors making sales through the Federal Supply Schedules are required to pay a fee—the industrial funding fee (IFF)—that covers program operations costs. IFF payments owed are a fraction of the total sales made. At no material cost, OES designed an electronic signature box included at the beginning of GSA’s online reporting portal, where vendors typed their signature below the prompt: “I promise that the information I am providing is true and accurate.” As a result of this change, the median self-reported sales amount was \$445 higher for vendors signing at the top of the form compared with vendors who did not see a signature prompt, translating into an extra \$1.59 million in IFF paid to the government in a single quarter.⁶⁰ However, the difference was smaller in subsequent quarters and not statistically significant.⁶¹

Both loss aversion and honesty pledges are ongoing areas of research, so in the future there may be stronger evidence about whether and how to use these principles effectively. For now, these examples are shared to give you a sense of the challenges that can be involved in finding and implementing an effective change, even when you borrow from published research. These challenges highlight the role of evaluation in quantifying effects of various principles.

Since applications of behavioral insights principles do not have the same effect in every situation, there is some risk involved in investing time, effort, and program funding (even if a very small amount) to implement them. It is also worth considering the risk that the changes you implement may backfire, either by increasing instead of decreasing improper payments, or by having an undesirable side effect on other outcomes (e.g., application rates). OMB memorandum M-21-19 states:



It is also worth considering the risk that the changes you implement may backfire, either by increasing instead of decreasing improper payments, or by having an undesirable side effect on other outcomes (e.g., application rates).



“Requirements for payment integrity should not negatively affect program mission, agency efforts to advance equity, efficiency, customer experience, or the overall operations of the agency; therefore, this guidance aims to ensure that federal agencies focus on identifying, assessing, prioritizing, and responding to payment integrity risks to prevent improper payments in the most appropriate manner.”⁶²

60. General Services Administration: Office of Evaluation Sciences. “Reducing self-reporting errors by IFF form users” (2015). Retrieved from <https://oes.gsa.gov/projects/iff-reporting-errors/>

61. General Services Administration: Office of Evaluation Sciences. “Industrial funding fee reports update” (2017). Retrieved from <https://oes.gsa.gov/projects/iff-confirmation-prompt-update/>

62. Office of Management and Budget. M-21-19, Appendix C to Circular No. A-123, Requirements for Payment Integrity Improvement (March 5, 2021). Retrieved from <https://www.whitehouse.gov/wp-content/uploads/2021/03/M-21-19.pdf>

How might a change backfire? Maybe people dislike your letter and decide to do the opposite of what you ask them. Or if you increase the documentation that's required for a benefit in an attempt to decrease improper payments, then eligible people might decide not to apply.

One example of unintended side effects comes from a project where researchers sent parents of middle and high school students multiple text messages per week with a prompt to ask their children specific questions tied to the science curriculum. These messages did increase parent-child conversations about science, but decreased parent engagement in other potentially productive behaviors such as turning off the television or monitoring their child's studying.⁶³ Careful consideration ahead of time can prevent some undesirable side effects, and systematic evaluation and measurement can identify them when they occur.

[Section 2](#) described several different behavioral insights principles. **Effective interventions often leverage several different principles.** A great way to decide which one or ones to use in your specific situation is to identify the underlying reasons for the behavior you're trying to change.

3.1

Diagnosing barriers to determine which principles fit

Think of the reasons for the behavior you're trying to change as barriers that are blocking the desired behavior.

The COM-B Model of Behavior Change provides a useful framework for categorizing these barriers to help make sense of what principles can best address them.⁶⁴ We've adapted these categories for this playbook, and stated them as whether someone:

- isn't *able* to,
- doesn't have the *opportunity*, or
- isn't *motivated* to.

Understanding the barriers makes it easier to decide which principle to apply: you choose the principle that addresses the barrier.

63. Carly D. Robinson, Raj Chande, Simon Burgess, and Todd Rogers. "Parent Engagement Interventions are Not Costless: Opportunity Cost and Crowd Out of Parental Investment." EdWorkingPaper (2020): 20-282.

64. Barrier categories adapted from Susan Michie, Maartje M. van Stralen, and Robert West. "The behaviour change wheel: a new method for characterising and designing behaviour change interventions." *Implementation Science : IS*, 6(42) (2011).

Barrier Type: **Knowledge or Ability** (“not able to”)

Example: A program staff member is confirming applicant eligibility without all required documents.	
Possible ability-related explanations:	Possible ability-related solutions:
<ul style="list-style-type: none">• A new program staff member does not know the full list of documents to check for.• Program documentation requirements have recently changed, and program staff are forgetting to check for the new required document.• The office recently switched over to a new data entry system with a different mechanism for uploading files. The staff member does not yet know how to upload the required documents.	<ul style="list-style-type: none">• Provide an at-a-glance checklist of required program eligibility documents, and post in the workspaces of all new employees.• Include a popup before submitting documents reminding program staff about the new required document and to double check they have uploaded it.• Train staff members on the new method for uploading documentation, and have a software representative on call in the first week to answer any questions or address technical challenges during the transition.

There are many reasons why someone might not be able to perform a certain behavior. Some of these are not feasible to change. But many ability barriers can be overcome. When people aren't able to do something because they don't know how, it can typically be addressed via education or training. To make it clear which type of “ability” barriers can be addressed with a behavioral insights approach, the rest of the playbook sometimes uses the terminology “knowledge or ability.”

However, remember that knowledge is only one small part of behavior change, and is rarely a sufficient solution on its own. For example, think of the last time you were trying to start a new habit—was knowing how to perform the action the only barrier you needed to address in order to create and maintain the habit? Before assuming that information or training is the only solution to a problem, do be sure to actively consider other possibilities.

If you are confident that knowledge, ability, or skill is one of your main barriers, great! Though education and training in and of themselves are not behavioral insights principles, those principles can be used to improve education and training or to reduce the need for it.

If you identified knowledge or ability barriers, consider exploring

- ☑ Reminders, [Section 2.1](#)
- ☑ Simplification, [Section 2.3](#)
- ☑ Boosts, [Section 2.9](#)

Barrier Type: **Opportunity** (“no opportunity to”)

Example: A program staff member is confirming applicant eligibility without all required documents.

Possible opportunity-related explanations:	Possible opportunity-related solutions:
<ul style="list-style-type: none">• A program staff member does not have time to follow up on missing eligibility data without falling behind on new applicants.• The database does not notify staff members when they leave a field blank, so they submit an incomplete application without realizing they have done so.• An office has a norm to send payments within a week of the request, which sometimes means payments are made before all documentation has been signed off on.	<ul style="list-style-type: none">• Hire new staff members to increase capacity (<i>Not a behavioral insights principle</i>) Or, reduce hassles by having staff focus on only a subset of important documentation.• Add a pop-up to the database software that shows program staff when they attempt to submit an incomplete application.• Identify a trusted messenger, like the program director, who can help change this norm to prioritize compliance over timeliness.

Sometimes people have the knowledge and skills required to do something, but don't have the resources they need to act. This can be due to a lack of time, money, physical access, or supplies required to do something, or aspects of the social environment, like counterproductive norms or lack of social support. In an improper payments context, organizational or agency norms may be particularly important to consider when designing behavioral insights interventions. Changing the environment (rather than trying to change the person) can often be a powerful way to achieve lasting change, with less burden on individuals.

Opportunity barriers usually require changing the environment to encourage a behavior, rather than trying to change the individual. If a client doesn't read English, they may not be able to complete a form that is only available in English, but making it available in other languages or providing a translator (i.e., changing the environment rather than the person's ability) can be viable solutions.

It's also important to consider how opportunity barriers may combine with ability or motivation barriers. For example, if you decide to address a lack of knowledge—e.g., you learn that people who are processing claims don't have a clear understanding of what to approve or deny—with training, then make sure you don't give this training in a format or time and place that people will not be able to access it.

If a behavior is not happening in part due to the physical or social environment, consider exploring:

- Reduce hassles, [Section 2.2](#)
- Norms, [Section 2.6](#)
- Messenger, [Section 2.7](#)

Barrier Type: **Motivation** (“not motivated to”)

Example: A program staff member is confirming applicant eligibility without all required documents.	
Possible motivation-related explanations:	Possible motivation-related solutions:
<ul style="list-style-type: none"> • A program staff member intends to wait until the end of the week to follow up on missing documentation, but ends up too busy to do so as planned. • A staff member personally believes that it’s more important to get assistance out quickly than to ensure that all payments are accurate without a specific policy directive. • An experienced staff member is uncomfortable with the newly-implemented database and is procrastinating on transferring over existing data required to confirm eligibility. 	<ul style="list-style-type: none"> • Encourage program staff members to look back at last week’s time allocation to plan based on how long things <i>actually</i> took, versus how long they <i>anticipate</i> they will take. • Highlight the consequences of improper payments on program integrity, and create a structure where staff are rewarded for accurate payments. • Emphasize the positive aspects of the database, and support staff members as they onboard to the new system.

Motivation here, meaning “I don’t want to do that” or “I don’t think I need to do that,” goes beyond attention and understanding (“I didn’t realize I was supposed to do that”). Of course, improper payments do often stem from limited attention or poorly explained information. But in other cases, people have paid attention and understood, but still aren’t doing what they are asked, because they are not motivated.

Sometimes there are good reasons why people are unmotivated. When the costs of a certain behavior are bigger than the benefits that would come along with that behavior, then people usually won’t act.

You can attempt to address lack of motivation through education, persuasion, or positive and negative consequences. You can also use behavioral insights principles to help people follow through on the gap that commonly arises between intentions and actions.

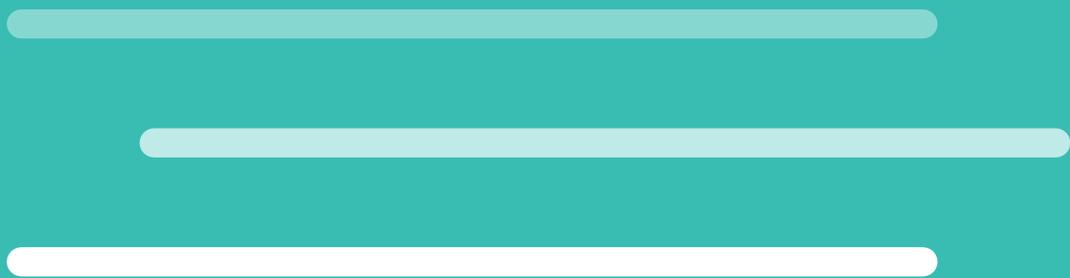
Of course, motivation doesn’t come only from things we think carefully about. Motivation can also be more automatic, like emotional reactions, desires, impulses, and inhibitions. These factors are more difficult to address directly with a behavioral

insights approach, but are useful to consider when designing interventions. Improving the experience of doing a task is not mutually exclusive with persuading someone that it is important; think about what tasks or behaviors people may have negative emotional reactions to or tend to avoid, and consider how to account for that.

If you see motivation barriers in your program, consider using

- Messenger, [Section 2.7](#)
- Consequences, [Section 2.5](#)
- Norms, [Section 2.6](#)
- Planning, [Section 2.8](#)

4. Applying a Behavioral Insights Approach



Now that you have a sense of the principles that can be applied to change behavior, it's time to get a better understanding of how a behavioral scientist would apply them. The text in this section is accompanied by seven worksheets that should make it easier to understand what's involved at each step, and give a chance for you to try it out yourself.

As you'll see, this approach involves clearly identifying the behavior you want to change.

In steps 1-4, you also think through

- who is involved,
- what is influencing their behavior (particularly any problematic behavior contributing to improper payments), and
- which behavioral insights principles seem like promising ways of changing that behavior.

After this initial brainstorming, in steps 5-7, you

- assess the options,
- decide which are most promising to implement, and
- identify what needs to be done, when, to make the changes happen.

You shouldn't need any special education or training to complete these steps. But it may feel hard or confusing, especially at first. For many people, the behavioral insights approach is a novel way to approach improper payments. This difference is part of what makes the approach useful, but also intimidating.

For this reason, it may be helpful to work through these materials with several colleagues for brainstorming and collaboration. It is best if the worksheets are filled out independently before being discussed as a group. Full-size blank worksheets can be found in [Section 6.1](#).

4.1

Step 1: Identifying People

When designing a behavioral insights intervention, you'll want to understand the context in detail. Start by describing a specific improper payment and identifying all of the individuals or groups who are involved. This is a preliminary step to thinking about how one might change their behaviors.

Advice for completing this step: If there was a recent audit, pull out a payment that was identified as improper, and describe what happened. Include enough detail that you can list all of the people who were involved. For some programs, it might help to imagine that you're "following the money," by describing all the hands that a payment request and the corresponding payment pass through.

Alternatively, start by identifying the person (or company) that is accessing the resource. For example, in a program where federal funds go to states which then hire contractors (e.g., to build roads), think about the steps the contractor company would go through to submit a claim for payment. Consider everyone they interact with, and place those names in the bubbles on the lower part of the page. The actions they take that lead to improper payments go in the box on the top part of the page.

You will probably want to repeat Worksheets 1-4 several times to make sure that you've covered the key types of improper payments that happen in your program.

1. Identifying People
To get started, you'll need to focus on a particular improper payments scenario and the people involved.

1. Describe one common scenario that results in an improper payment.

2. What is the root cause of the improper payment (if known)?

3. Name each audience involved in the improper payment scenario.

The diagram shows four empty boxes arranged in a diamond shape, with dashed arrows pointing from each box up to the root cause box.

Blank worksheet on page 76

Worked Example of Step 1

This process is illustrated with a hypothetical example. Imagine this scenario:

The year is 2121. The US Department of Greenspaces and Wellbeing (DGW) is partway through an ambitious program of building parks and community recreation areas across the country. However, a recent audit showed an unacceptably high rate of improper payments. DGW is working to apply a behavioral insights approach to address the source of these improper payments. The following pages summarize how a team at DGW could think through designing an intervention to address the improper payment scenario.

DGW reviews the results of their recent audit. They have some payments categorized as “unknown payments.” These were mostly because people who received a Monthly Transit Subsidy (a benefit that DGW gives to low-income individuals who live further than walking distance from a recognized Greenspace) didn’t have up-to-date pay stubs on file so it’s not clear whether the subsidy they were paid was proper or improper. DGW also has improper payments in the category “failure to access data / information.” The major instance of this was a payment to a state for a vendor involved in the construction of a large new park. DGW was supposed to pay for 80% of the construction costs, and the state for 20%, but the state billed DGW for 100% of the cost and it was inadvertently paid.

In the course of this discussion, DGW team members fill out two versions of worksheet 1. In the first, they describe the unknown payments, and identify benefit recipients and payment processors as well as supervisors as being involved.

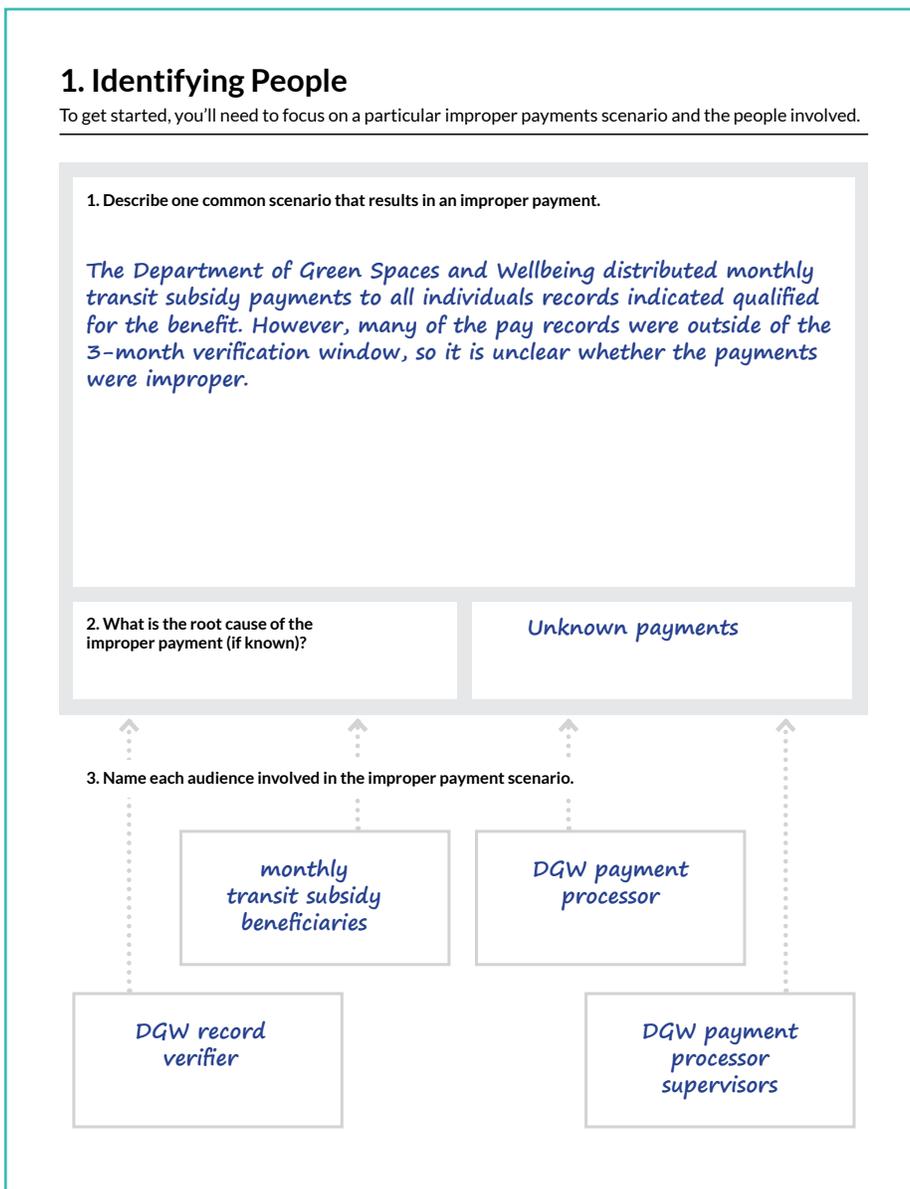


Figure 5. A sample worksheet identifying people for unknown payments.

In the second, they describe the improper payment related to the park construction bill, and identify construction company employees, state employees, and DGW payment processors as involved.

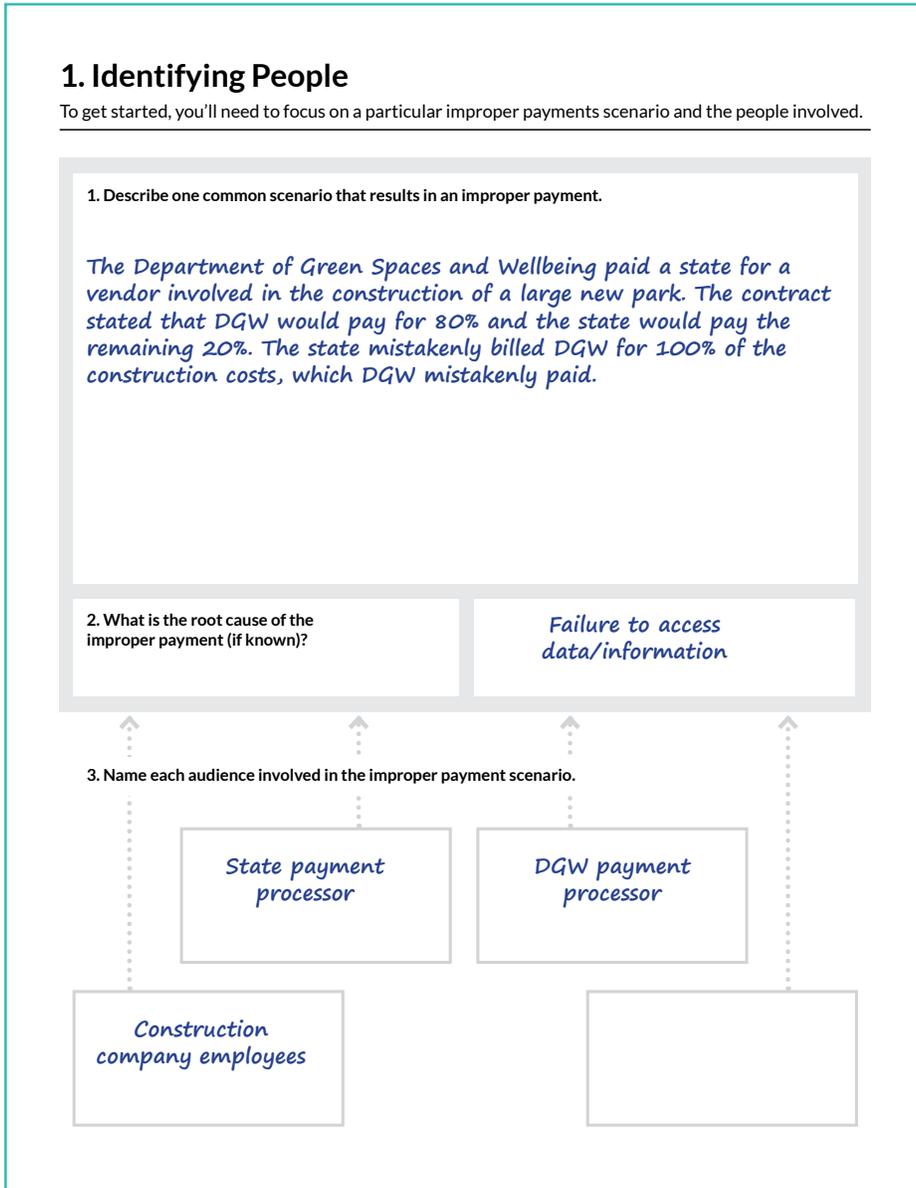


Figure 6. A sample worksheet identifying people for failure to access data/information.

4.2

Step 2: Identifying Behaviors

Understanding current behaviors is an essential first step to changing them. Now that you have a sense of who is involved, try to think about exactly what these people are doing. When the third column of Worksheet 2 is blank, it indicates that this behavior is not going to be a good target for a behavioral insights intervention, because there is no need to change it.

A behavioral insights approach is typically only relevant when an action individuals take (or don't take) could theoretically be influenced by a program change. This "individual action" looks very different from project to project. For example, it could be small farmers contacting a loan office to apply for an aid program, individuals enrolling in a healthcare plan, or patients scheduling and attending physician visits. The individual action is key because it is the behavior that you will try to change using behavioral insights principles.

Advice for completing this step: As a check, at the end of this worksheet, you should be able to write a sentence: WHO is doing (or not doing) WHAT (that is leading to an improper payment). The WHAT should be a concrete behavior that could be changed in a way that would reduce improper payments.

For example: "Agency employees are making data entry errors on Form XXXX" (if they made fewer errors, IPs would decrease) or "Beneficiaries are delaying notification of change of circumstances" (if they reported more quickly, IPs would decrease) or "State representatives are submitting claims for reimbursement for expenses that were not agreed" (if they did not submit these claims, IPs would decrease).

2. Identifying Behaviors

This exercise will help you begin to think about your program's payment integrity from a behavioral perspective.

WHO is involved?	WHAT are they (not) doing?	WHAT do they need to do?
1. In the first column, write down each audience you identified in worksheet 1.	2. For each person, write down anything they do in this scenario that contributes to the improper payment.	3. For each behavior, write down a changed behavior that might help prevent the improper payment.

Audiences	Current Behaviors	Changed Behaviors
↓	→	→
↓	→	→
↓	→	→
↓	→	→

Blank worksheet on page 77

Examples of what counts as a behavior	Examples of what isn't a behavior
Apply for benefits	Receive benefits
Request a loan	Receive a brochure advertising loans
Notify caseworker of a change of status	Be phoned by caseworker
Verify documentation	Have an improper payment

Worked Example of Step 2

First, DGW completes Worksheet 2 for the unknown payments (UPs) scenario to identify the behaviors that are leading to the unknown payments. Benefit recipients are not providing current pay information (middle column), but if they were (far-right column), these UPs would be reduced. Also, it seems that neither payment processors nor their supervisors are ensuring that this information is on file and kept current before approving payments.

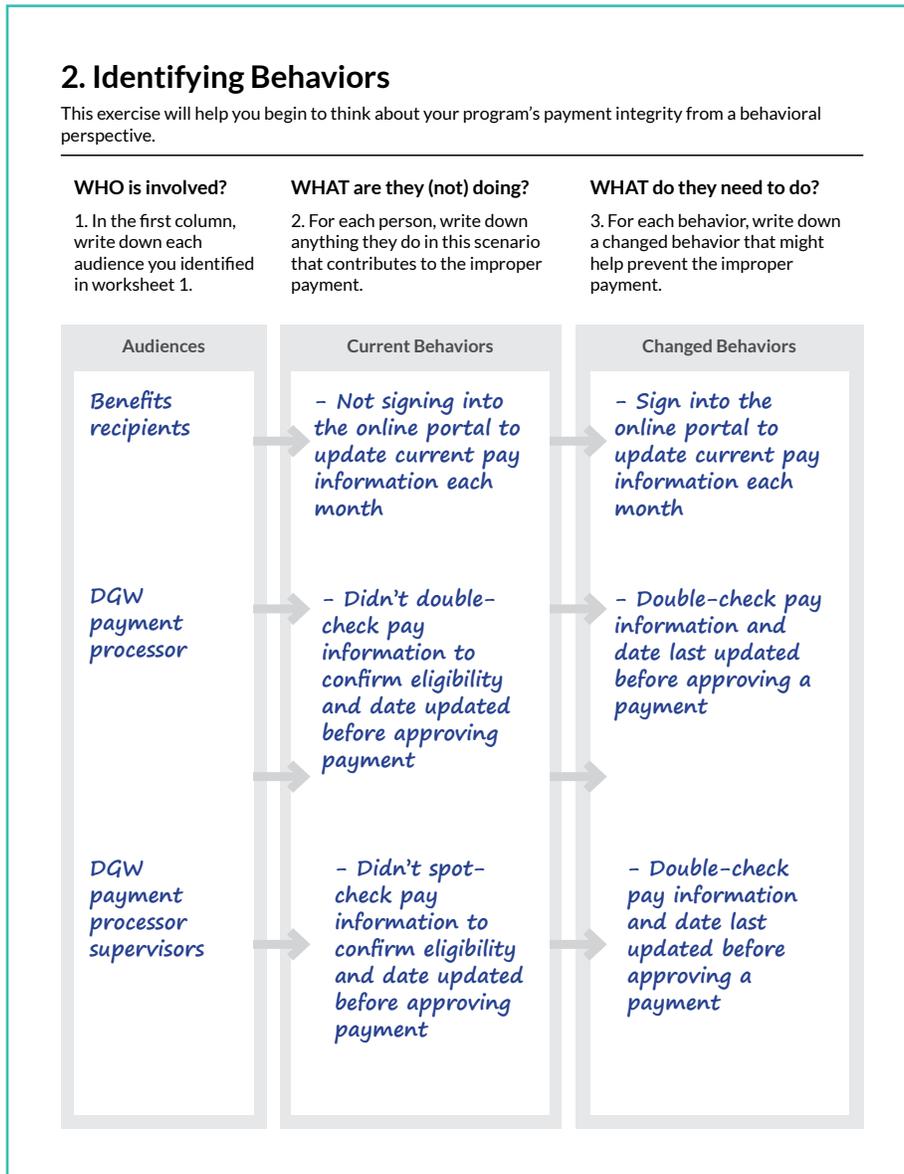


Figure 7. A sample worksheet identifying behaviors for unknown payments.

In a second pass focused on the improper payments (IPs), state employees may have made a typing error when billing DGW for construction costs. DGW payment processors apparently didn't double-check the billing rate against the contract on file before approving this payment; if they had, the IP would have been prevented. The construction company employees aren't doing anything that needs to change, so the far-right column stays blank in this case.

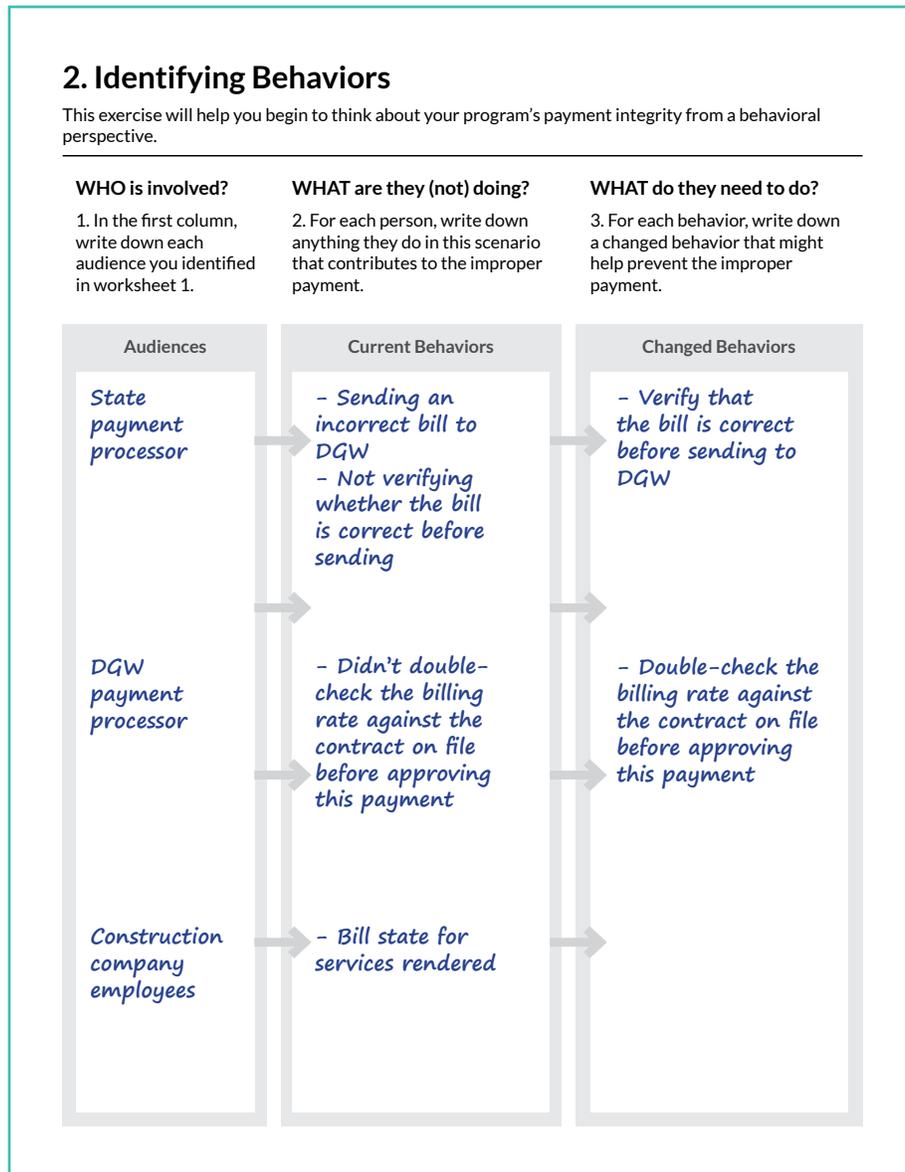


Figure 8. A sample worksheet identifying behaviors for failure to access data/information.

4.3

Step 3: Identifying Barriers

Now, try to understand *why* people are doing the behaviors identified on Worksheet 2. Focus on those behaviors where there's a gap between the description in the second column (what people are actually doing) and the description in the third column (what you want them to be doing, to reduce improper payments).

The better job you can do identifying the barriers responsible for the gap between what people are doing and what you want them to be doing, the better solutions you'll be able to come up with. Understanding the underlying barrier helps you determine what interventions are likely to be effective. There's more information about the types of barriers in [Section 3.1](#).

Sometimes you can look to data for more information, and also to probe whether what you think you know is right. Cause category analyses (see [Section 6.3](#)) from an auditor can be a useful data source. Metadata (i.e., data that gives information on other data, such as website click rates) can also be helpful. For instance, if many people leave a form incomplete, maybe the form is confusing or too difficult.) It can also be helpful to speak with some of the people you're interested in (e.g., clients, contractors, employees) in a low-stakes setting (e.g., in an informal roundtable discussion or via an anonymous survey) where they can feel comfortable giving honest feedback.

Advice for completing this step: Being as specific about the root of the problem as possible will help you identify where to target your intervention. For example, imagine that on Worksheet 3 you identified a gap between a desired behavior of responding to a request for verification, and an actual behavior of many people not responding. Now, try to figure out exactly why this gap occurs. For example, are people not receiving the request for verification because they entered their address incorrectly at an earlier stage, so it never reaches them? Are they receiving the request, but ignoring it? Or are they reading the letter but misunderstanding what to do? Etc.

Focus on situations where behavior is unintentional (rather than intentionally fraudulent). If there are many such situations to choose from, focus on those which likely lead to the highest volume of improper payments.

3. Identifying Barriers

In this exercise, we connect the dots between the behavior you've identified and the most promising approaches rooted in behavioral science.

Current Behavior	Changed Behavior

WHAT is keeping _____ from doing the changed behavior?

People are not able to do it (perhaps due to not having the specific knowledge or skills to do it in that moment, or not remembering to do it).

Read more about how behavioral insights can address knowledge and ability barriers on page 39.

They don't have the opportunity to do it (perhaps due to insufficient time or resources, or incompatible social norms).

Read more about how behavioral insights can help create an environment that supports behavior change on page 40.

People are not motivated to do it (perhaps due to beliefs that other things are more important, or discomfort with the changed behavior).

Read more about how behavioral insights can help boost motivation on page 42.

Blank worksheet on page 78

Worked Example for Step 3

DGW starts by focusing on the UPs. After some discussion with DGW employees who work directly with beneficiaries, the team decides that most beneficiaries who don't provide current pay information probably don't realize that they are supposed to. Many have been receiving this benefit for a long time and may have forgotten, if they ever knew this in the first place. (These are "barriers of ability" in [Section 3.1](#)) On the other hand, payment processors seem to know—theoretically—that they should ask beneficiaries for up-to-date pay stubs. DGW staff would fill out an additional worksheet for payment processors' barriers (not shown here), since payment processors might be a good audience for the intervention. DGW notes that these employees are busy and know that many beneficiaries are struggling, so asking for up-to-date pay stubs doesn't seem like a high priority. This sounds like a barrier of "motivation."

3. Identifying Barriers

In this exercise, we connect the dots between the behavior you've identified and the most promising approaches rooted in behavioral science.

Current Behavior

Beneficiaries are not signing into the online portal to update current pay information each month.

→

Changed Behavior

Beneficiaries are sign into the online portal to update their current pay information each month.

WHAT is keeping transit subsidy beneficiaries from doing the changed behavior?

People are not able to do it (perhaps due to not having the specific knowledge or skills to do it in that moment, or not remembering to do it).

- *Beneficiaries do not know they are supposed to update their pay information each month.*
- *Beneficiaries forget to update their pay information some months.*

Read more about how behavioral insights can address knowledge and ability barriers on page 39.

They don't have the opportunity to do it (perhaps due to insufficient time or resources, or incompatible social norms).

- *Some beneficiaries may have forgotten their password, so do not have access to their account to update their pay information.*

Read more about how behavioral insights can help create an environment that supports behavior change on page 40.

People are not motivated to do it (perhaps due to beliefs that other things are more important, or discomfort with the changed behavior).

Read more about how behavioral insights can help boost motivation on page 42.

Figure 9. A sample worksheet identifying barriers for unknown payments.

DGW then turns to the IP scenario. Again some discussion ensues. It turns out that the vast majority of the time, state billing is consistent with contractual agreements. For this reason, there's no habit of double-checking or confirming payment rates. And actually, contracts are stored in a separate database which the front-line payment processor doesn't have easy access to. The team agrees that this is mainly a barrier of "opportunity."

3. Identifying Barriers

In this exercise, we connect the dots between the behavior you've identified and the most promising approaches rooted in behavioral science.

Current Behavior

Didn't double-check the billing rate against the contract on file before approving this payment

→

Changed Behavior

Double-check the billing rate against the contract on file before approving this payment

WHAT is keeping DGW payment processors from doing the changed behavior?

People are not able to do it (perhaps due to not having the specific knowledge or skills to do it in that moment, or not remembering to do it).

Read more about how behavioral insights can address knowledge and ability barriers on page 39.

They don't have the opportunity to do it (perhaps due to insufficient time or resources, or incompatible social norms).

Contracts are stored in a dedicated database, which front-line payment processors do not have easy access to.

Read more about how behavioral insights can help create an environment that supports behavior change on page 40.

People are not motivated to do it (perhaps due to beliefs that other things are more important, or discomfort with the changed behavior).

Payment processors (correctly) believe that state billing is almost always consistent with contractual agreements. Therefore, they do not believe they would need to double-check.

Read more about how behavioral insights can help boost motivation on page 42.

Figure 10. A sample worksheet identifying barriers for failure to access data/information.

4.4

Step 4: Applying Behavioral Insights Principles

The next step is identifying one or more interventions that may address the barriers identified on Worksheet 3. Most of the principles in [Section 2](#) are very broad. For instance, “Reduce hassles” could mean making a form that payment recipients complete easier by pre-populating some of the content, or making that form easier for the intended recipients to access on your website, or making the process of verifying information simpler for your contractors by removing some of the most effortful parts of that process. The behavioral scientist will try to come up with several ways that each principle could be applied.

Advice for completing this step: At this point, all the time you spent earlier identifying “who is doing what, and why,” might start to make more sense.

Look through [Section 3.1](#) for ideas about which behavioral insights principles are the best fit to address different sorts of barriers.

Things may seem confusing at this point, but don’t get discouraged. Even if you don’t understand everything perfectly, you’re coming up with useful ideas, and you’ll continue to improve them as you move forward.

As you think about how to implement each principle, focus on the situations where you have some leverage to implement a type of change. For example, if the group you’re targeting is already receiving letters, you might be able to change the content of the letters. If the Paperwork Reduction Act limits your ability to change a form, or if there are statutory limitations on the content of letters you’re working with, you may want to change envelope design to encourage individuals to open letters. But do try to think broadly: often, changes to processes and requirements have bigger effects than changes to communications.

4. Applying Behavioral Insights Principles
Worksheet 3 led you to some specific behavioral insights recommendations. This worksheet will help you think of ways the recommendations could be applied to your program.

Changed Behavior		
Behavioral insights we might apply	Where? To what?	Change to make
1. In the first column, write down the behavioral insights you are considering.	2. Write where you will implement the behavioral insights, e.g. a form, letter, process, etc.	3. Add more details to describe how you would implement the behavioral insights.

Blank worksheet on page 79

Worked Example for Step 4

Starting with the UPs and on the beneficiary side, DGW thinks about whether beneficiaries could be given reminders by letter, email, text message, or posters (e.g., in the greenspaces). They also wonder whether the process could be simplified altogether—could DGW request pay information directly from employers so that beneficiaries don't need to act? Or maybe the focus should be on changing the behavior of payment processors. Perhaps their motivation could be increased with messages that use norms or moral reminders, or that introduce consequences (rewards for compliance, punishments for continued noncompliance), or that remind them about the consequences that already exist like pride, accuracy, and funding for truly eligible beneficiaries.

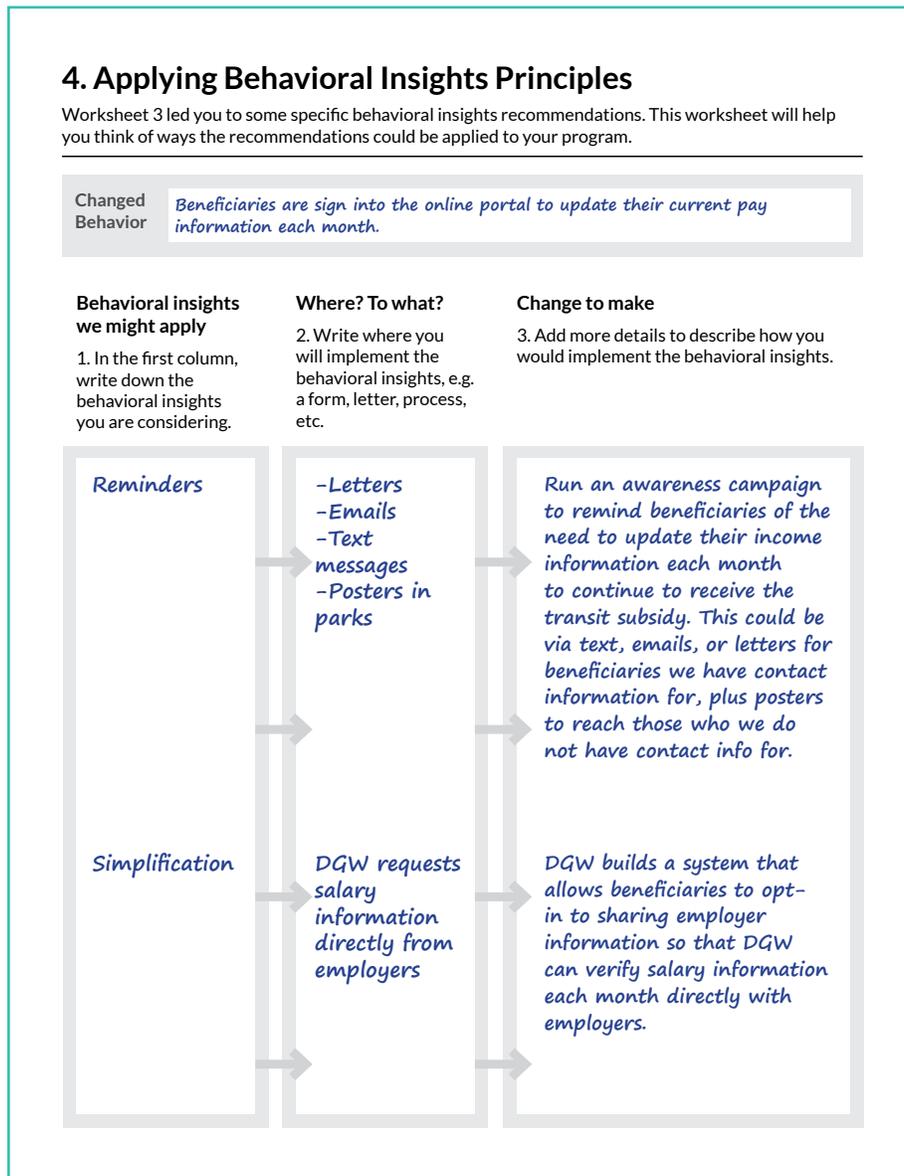


Figure 11. A sample worksheet applying behavioral insights for unknown payments.

When they turn to the IP scenario, DGW first wants to learn more about how feasible it would be to link the databases that hold contractual information and billing submissions. If these could be linked, software could be used to check for compliance automatically and flag any discrepancies for the processor. This seems a better use of time and energy than introducing a complicated manual check, especially since the rates of these errors are low overall.

4. Applying Behavioral Insights Principles

Worksheet 3 led you to some specific behavioral insights recommendations. This worksheet will help you think of ways the recommendations could be applied to your program.

Changed Behavior	<i>Beneficiaries are sign into the online portal to update their current pay information each month.</i>	
Behavioral insights we might apply	Where? To what?	Change to make
1. In the first column, write down the behavioral insights you are considering.	2. Write where you will implement the behavioral insights, e.g. a form, letter, process, etc.	3. Add more details to describe how you would implement the behavioral insights.
<i>Simplification</i>	<i>Automatically compare contract information and billing information</i>	<i>Link databases that hold contractual information and billing submissions. Software checks for compliance automatically and flags discrepancies for the processor to resolve.</i>

Figure 12. A sample worksheet for applying behavioral insights for failure to access data/information.

4.5

Step 5: Assessing & Prioritizing Ideas

This step is to decide what idea(s) to focus on based on the impact and feasibility of each of the ideas generated during the previous step. Ideas that end up in the high impact/high feasibility quadrant (see Worksheet 5) are worth pursuing further, and ideas that are low on both are probably better abandoned. Prioritizing between the other two quadrants will depend on what's most important in a specific agency or program.

- If resources are scarce and there's little appetite to do something big and resource-intensive, it makes sense to focus on the high feasibility ideas that are still likely to have *some* impact.
- If resources aren't too stretched and the team is willing to invest more effort to have a chance of bigger impact, focus on the high impact ideas. Remember that expensive changes (e.g., large one-time costs to make a system change) with a big impact may end up being very cost-effective. And changes that are low-cost per person targeted (e.g., text messages) but which don't have much impact may not be very cost-effective.

5. Assessing & Prioritizing Ideas
Let's start to think about the potential impact, feasibility, and risks of your ideas to help prioritize which to move forward with.

List your intervention ideas from worksheet 4 rate ideas based on potential for impact and feasibility. Then, consider potential risks and limitations.

	++ Extremely promising!	+ Somewhat promising	- Not very promising	-- Likely not promising	? Unknown
Behavioral intervention					

5. How, if at all, might you combine some of these ideas?

Interesting ideas? Go to worksheet 6 to further develop intervention concepts.

Blank worksheet on page 80

Advice for completing this step: Estimating the likely *impact* of a change involves a look back to Worksheets 2 and 3. A change that addresses behavior that's connected to a large amount of improper payments (because it addresses a barrier faced by many people, or because it addresses a barrier that leads to high dollar value improper payments) probably has a bigger potential impact than a change aimed at behavior that only causes a small amount of improper payments. A change in an early step in the process may also have a larger impact.

Estimating the *feasibility* of a change involves thinking about how many people would have to get on board for you to make this change, what it would cost, and what kind of effort is needed. For example, changes that trigger the Paperwork Reduction Act are generally less feasible than changes which don't. Sending emails or text messages, for example, is often less expensive than printing and sending paper letters. Think about cost not just in terms of things like printing and distributing materials, but also how much staff time is needed to develop and execute changes, and the potential risks of the change, as discussed in [Section 1.2.1](#).

Worked Example for Step 5

With this guidance in mind, the DGW team discusses their list of ideas. Reminders to beneficiaries are feasible, but they don't seem likely to be very impactful. They'd have to be sent regularly or else people would just forget again, and if the same letter or text keeps coming (or the same poster stands in the greenspace), people may start to ignore it. Changing the process so that pay information comes directly from employers would be hugely impactful, but isn't very feasible—this kind of data sharing usually takes a long time and a lot of resources to enable. Messages to payment processors may be less impactful than automating the receipt of pay information, but seem more promising than reminders to beneficiaries, and more feasible given the smaller target audience size. At this stage, DGW decides to concentrate on the UPs rather than the IPs, because they seem more feasible to address and are more common.

Revisiting the messaging to payment processors, the team debates whether these could backfire. Putting too much emphasis on keeping documentation current may mean that some eligible beneficiaries don't get benefits. Negative consequences like fines and punishments might make that especially likely, and DGW decides to take that option off the list.

5. Assessing & Prioritizing Ideas

Let's start to think about the potential impact, feasibility, and risks of your ideas to help prioritize which to move forward with.

List your intervention ideas from worksheet 4 rate ideas based on potential for impact and feasibility. Then, consider potential risks and limitations.

++	+	-	--	?
Extremely promising!	Somewhat promising	Not very promising	Likely not promising	Unknown

Behavioral intervention	Potential for impact?	Feasibility?	Potential risks and limitations
<i>Reminders to beneficiaries to update their salary information monthly</i>	-	+	<i>People are likely to get used to the reminders over time, and they are expensive to send consistently</i>
<i>Get salary information directly from employers so that beneficiaries do not need to update it</i>	++	--	<i>Difficult and time-intensive to set up data sharing, potential privacy concerns</i>
<i>Send messages to payment processors to emphasize importance of confirming eligibility and/or consider fines/punishments for not doing so</i>	+	++	<i>Putting too much emphasis on keeping documentation current might mean that some eligible beneficiaries don't get their benefits</i>

5. How, if at all, might you combine some of these ideas?

Best to start with single-component intervention and revisit if it does not have desired impact.

Interesting ideas? Go to worksheet 6 to further develop intervention concepts.

Figure 13. A sample worksheet for assessing and prioritizing ideas for unknown payments.

4.6

Step 6: Detailing Your Intervention

This step involves deciding what exactly you're going to do. This might mean moving forward with the single best idea from Worksheet 5. Or, it could mean combining several ideas from the previous step. Each individual change might have only a small effect, so combining them can increase effectiveness.

For instance, if you're updating a letter, maybe it's just as easy to incorporate several principles in the text (e.g., reduce the length, use color and formatting to attract attention to the key message, share information about a norm, sign it from a relevant messenger, and so on).

Of course, some changes are incompatible. For example, if an agency considers changing a process from manual renewal to auto-renewal, they may not need to also send a letter reminding beneficiaries about the renewal process. Many of these changes require effort and social capital and it may make sense to concentrate those resources behind just a few of your most promising ideas.

Advice for completing this worksheet: This is the time to think about how the change will work in practice. How big is the audience that will be targeted? If there are 2 million potential letter recipients, are you going to send all of them letters at once, or send to a small group first and everyone else later, or do some further targeting to find the best subgroup to receive them?

Is this going to be a single intervention, or repeated over time? For example, the peer comparison letters sent to physicians who were prescribing a high volume of medication, described in [Section 2.6](#), were sent three times (April, August, and October) rather than just once. The second and third letters showed updated prescribing data, and were intended to be a way to increase the impact of peer comparisons.

Also consider questions like: how long will it take the intervention you've designed to get up and running? Is there a time constraint or deadline? What will it cost? Does the funding need to be written into a future budget?

6. Detailing Your Intervention
Use this worksheet to describe your intervention ideas in detail.

Current Behavior		Changed Behavior	
[]		[]	
Format: How will you deliver your intervention?	Audience: Who will experience your intervention?	Timing: When does the intervention need to occur?	
[]	[]	[]	
Describe your intervention below			
Barriers your intervention is addressing		Behavioral insight(s) used	
[]		[]	

Blank worksheet on page 81

The aim on this worksheet is to answer all of the questions that someone could reasonably ask, to make sure you're ready to get others on board. If there are questions here that you can't answer, this is a good time to connect to others who can help.

Worked Example for Step 6

Based on considerations at the previous step, the DGW team decides to create messages to payment processors that will try to increase their motivation to keep beneficiary pay stubs up to date. They decide to send the messages by email. They explore messages based on liking (reminding payment processors about what DGW has done for the processors), norms ("95 out of 100 payment processors keep beneficiary pay stubs up to date..."), and planning prompts (prompting recipients to identify a day and time they will regularly review pay stubs and pursue needed updates). They want to keep each email short, so they decide to use only one of these messages, and repeat the emails for three quarters, using a new message each time.

6. Detailing Your Intervention

Use this worksheet to describe your intervention ideas in detail.

<p style="text-align: center; font-weight: bold;">Current Behavior</p> <p><i>DGW payment processor does not keep beneficiary pay stubs up to date.</i></p>	→	<p style="text-align: center; font-weight: bold;">Changed Behavior</p> <p><i>DGW payment processor updates beneficiary pay stubs every month</i></p>
--	---	--

<p>Format: How will you deliver your intervention?</p> <p><i>Short email messages</i></p>	<p>Audience: Who will experience your intervention?</p> <p><i>DGW payment processors</i></p>	<p>Timing: When does the intervention need to occur?</p> <p><i>We will email payment processors quarterly</i></p>
--	---	--

Describe your intervention below

We will send three short emails to payment processors, one per quarter, with messages based on liking (reminding payment processors about what DGW has done for the processors), norms ("95 out of 100 payment processors keep beneficiary pay stubs up to date..."), and planning prompts (prompting recipients to identify a day and time they will regularly review pay stubs and pursue needed updates).

<p>Barriers your intervention is addressing</p> <p><i>Motivation: payment processors do not believe it is important to update pay stubs promptly, and it is easy for this task to slip off the to-do list</i></p>	<p>Behavioral insight(s) used</p> <ul style="list-style-type: none"> - Norms - Planning prompts - Messenger (liking)
--	--

Figure 14. A sample worksheet for detailing interventions for unknown payments.

4.7

Step 7: Making it Happen

Now that all the details of the changes you'd like to make have been identified, it's time to fit this into a bigger picture. There are two goals at this step, as seen on Worksheet 7.

The top part of Worksheet 7 is for working backward and thinking about the concrete steps that will have to be taken to make this happen. The bottom part of Worksheet 7 is to work forward from the intervention and think about how to measure the effectiveness of the changes that were made.

Advice for completing this worksheet:

The top part of this worksheet unpacks the task of implementing the changes you identified into smaller pieces. This unpacking helps us be more realistic about how long things will take.⁶⁵ Just like you thought about WHO was doing WHAT leading to improper payments, now you'll want to think about who needs to do what, and when, to make your change happen. Start by working backward from your intervention, ending up at the next steps to take now that it's been designed.

On the bottom part, try to identify who will be doing something as a result, what will that look like, and when will it happen? Sometimes your agency won't have a perfect measure of the behavior you think will change, and that's OK. If you identify any measures of these outputs and outcomes that exist in data your agency could access, this is a great starting point for thinking about how you can evaluate the effectiveness of the changes you make.

If you would like to get support with implementing the intervention and evaluating its effectiveness, consider collaborating with the Office of Evaluation Sciences or another group that offers similar services. Some OES resources are linked in [Section 6.2](#).

7. Making it Happen
Now that you've designed your intervention, this worksheet will help you map out the concrete steps required to implement it and evaluate its effects, along with who you'll need to get on board, when.

	Steps	Dates	People
Plan intervention	Finish designing intervention using worksheets 1-6		
	Get any additional internal stakeholders on board		
	Finalize intervention		
	Determine resources required for implementation		
	Prepare resources for implementation		
	Implement intervention		
Evaluate intervention	When and who will measure who is doing what as a result of your intervention? (Outputs)		
	When and who will measure the impact on improper payments? (Outcomes)		
	When and who will report results and determine next steps?		

Want more detailed resources on evaluation? Check out OES's Evidence Act Toolkit at <https://oes.ssa.gov/toolkits/>

Blank worksheet on page 82

65. Justin Kruger and Matt Evans. "If you don't want to be late, enumerate: Unpacking reduces the planning fallacy." *Journal of Experimental Social Psychology* 40, no. 5 (2004): 586-598.

Worked Example for Step 7

Finally, the DGW team maps out a rough timeline for implementing their intervention, and enters placeholders to follow up with colleagues who might be interested in helping implement it.

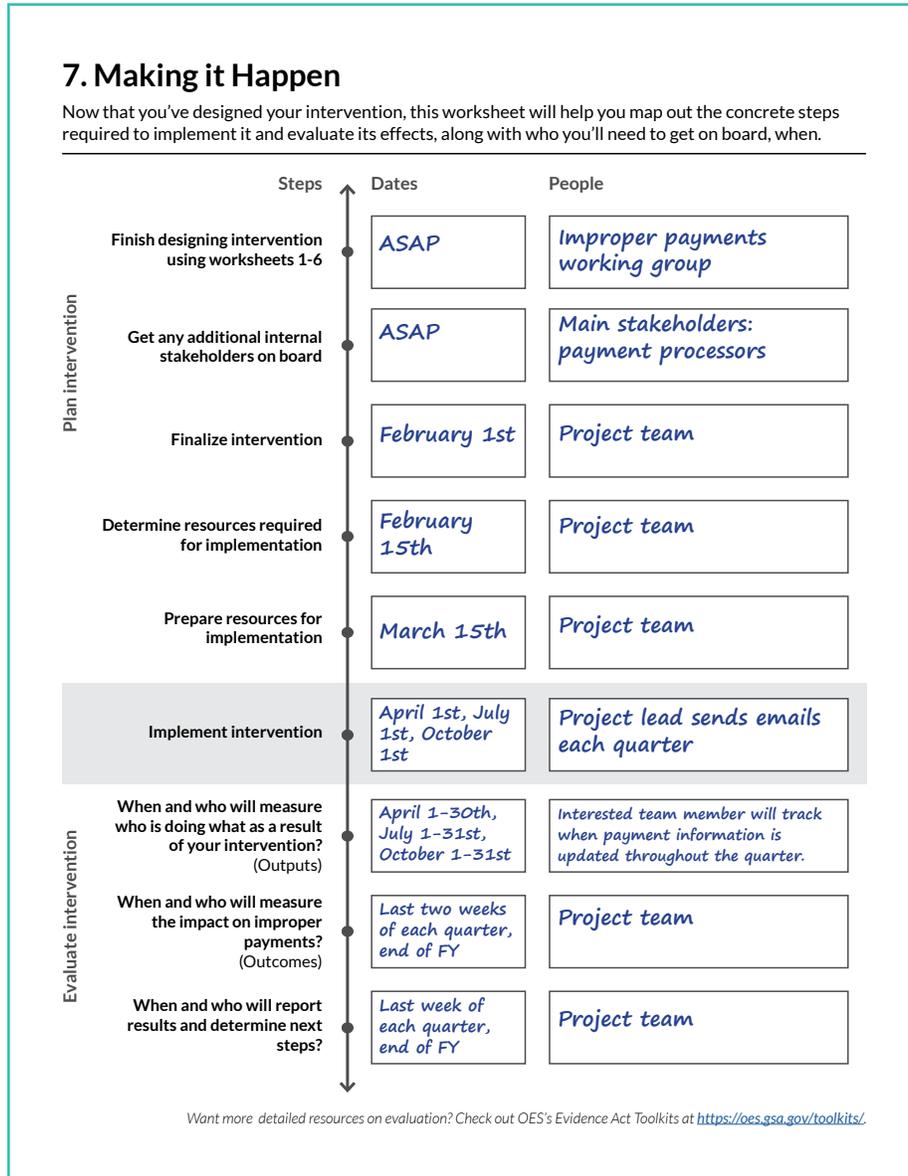


Figure 15. A sample worksheet for outlining steps for unknown payments.

Final Consideration: Getting an agency on board

You'll have more success building support for a behavioral insights project when you:

1. have a full sense of the underlying process and identify the potential behavioral barrier(s) that an intervention will target, and
2. tie the outcome(s) of any intervention to a strategic goal or mission for your division, agency, or department.

In conversations with colleagues and supervisors, it can help to emphasize how the intervention can affect measurable outcomes and how these outcomes can move the division, agency, or department towards meeting its strategic goals, reducing compliance burdens, and/or saving staff time.

If possible, you could reach out to colleagues or other agencies who have used a similar intervention and who may be interested in the results of your changes. If others have conducted a similar intervention, then ask about staff commitments, cost, and the results. This information can help you determine if the intervention is worth pursuing further, and these questions can give you the necessary information to convince those in your own office that the staff time and other costs are worth the possible benefit of conducting the intervention.

If no one has done something similar, that's great! You have the opportunity to do something innovative that may save money for your agency and the American taxpayers and improve the delivery of public services.

Here's a story from Jessica Skretch, a Senior UX Designer at the Federal Reserve Board:

"I first learned about behavioral science interventions at a conference where a case study was shared of simply changing some of the language in a letter to veterans, measuring response rates between the two letters, and ultimately improving outcomes for the program. At the time I was part of a design and communications team at the Federal Trade Commission. I immediately wanted to test some of the design decisions that we speculated about in our consumer refund mailings, including for example, the color of envelopes.

Pitching the idea: First I took the idea to my manager. With their support, I pitched it to the director of the operations team who oversaw the refund program mailings. I also talked with other agencies that send similar mailings to see if they had ever done something like this to make sure we weren't reinventing the wheel. We were not!

People were very receptive when the pitch focused on how useful it would be to know if these variables made a difference in the ultimate response rate. Might we

be able to spend money more wisely on the mailings? Might we be able to achieve better response rates by making some simple changes?

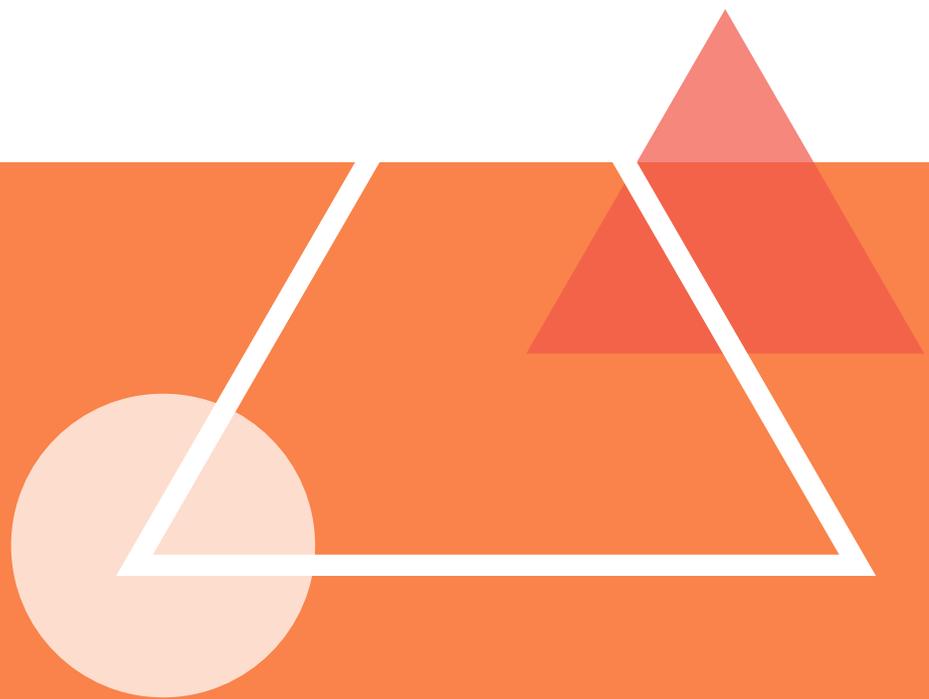
Who was involved? Myself (the designer and instigator), refund program managers, contracting staff responsible for the mailings including randomizing assignment of the variables, and finally an economist at our agency who helped analyze the response data.

My advice would be: (1) If you haven't done something like this before, start by pitching it as a pilot. Ask to try this on one thing and see how it goes. Hopefully this approach creates a low stakes environment where people are open to experimenting. (2) Be creative with who you might be able to pull together as a team. There might be people who you don't normally work with that could lend skills to make this happen."

Conclusion

A behavioral insights approach to improper payments can be a creative and cost-effective way to improve payment integrity while generating positive experiences for administrators and payment recipients. Hopefully you've found a few ideas in this playbook for your own agency or program. The Office of Evaluation Sciences would love to hear about what you found useful—or difficult—and what you did. Please reach out to us any time at oes@gsa.gov. We wish you the best of luck!

5. Case Studies



Throughout the playbook, you've read short examples of ways that behavioral insights have been applied. This section shares four longer examples of situations relevant to improper payments. Along with summarizing information from the References provided, we have shared our best guesses about what barriers each intervention was targeting, using the framework discussed in [Section 3.1](#). Hopefully this detail helps you better understand how behavioral insights interventions can be rooted in ideas about the barriers that prevent the desired behavior.

5.1

Applying Behavioral Insights to Improve Tax Compliance

Agency or program:

In the United Kingdom, Her Majesty's Revenue and Customs (HMRC) (the equivalent of the US Internal Revenue Service in the United States). Work was done in collaboration with the Cabinet Office's Behavioral Insights Team.

What was the improper payment?

This work targeted tax revenue collection rather than improper payments. However, the implications are relevant for government payments that rely on compliance with tax regulations. Many people honestly declare their income and deductions but are late or deficient in actually paying the tax they owe. A 2007 paper estimated that "16% of the gross tax gap in the US is from enforced or late payment."⁶⁶



Procrastination was keeping some taxpayers from paying what they owed.

What barriers were targeted?

These interventions target people who have the funds to pay the tax they owe but who procrastinate on paying. Procrastination happens for many reasons, ranging from simply forgetting the payment is due to actively putting off acting on it.

In the framework from [Section 3.1](#), these are barriers of

- Knowledge/Ability (forgetting payment is due), and
- Motivation (thinking that paying quickly is relatively unimportant).

66. Joel Slemrod. "Cheating ourselves: The economics of tax evasion." *Journal of Economic perspectives* 21, no. 1 (2007): 25-48.

Forgetting can be addressed with many types of reminders. But the authors speculated that procrastination will be reduced when the moral cost of delaying payment seems sufficiently high. The moral cost of delaying payment can be increased by giving information about the generally high rate of compliance. This information should motivate people to pay what they owe sooner.

What was the intervention?

About 100,000 taxpayers who had filed a Self Assessment tax return and had not paid the correct amount by the deadline were sent a letter with information on the amount owed and how to pay. One of five short messages was also added to some of the letters:

- Nine out of ten people pay their tax on time. (“basic norm”)
- Nine out of ten people in the UK pay their tax on time. (“country norm”)
- Nine out of ten people in the UK pay their tax on time. You are currently in the very small minority of people who have not paid us yet. (“minority norm”)
- Paying tax means we all gain from vital public services like the NHS, roads, and schools. (“gain-framed public good”)
- Not paying tax means we all lose out on vital public services like the NHS, roads, and schools. (“loss-framed public good”)

A sixth group of late taxpayers (“control group”) had no extra message added.

What was the effect?

Some letters were sent earlier than others, which allowed the researchers to observe the effect of being sent any letter at all. Being sent any letter at all increased the probability of making a tax payment (in the 22 days after it was sent) by about 7 percentage points. Some of the short messages were particularly effective. Specifically,

- Including the minority norm message increased the probability of payment by an additional 4.9 percentage points over the control group (which was sent a basic letter with no extra message).
- The other two norm messages had smaller effects (1.2 and 1.7 percentage points) which were similar to the gain-framed and loss-framed public goods messages (each around 1.3 percentage points).
- All of these letter versions with short messages added were more effective than the control group letter.



Authors estimated that the minority norm message generated the government GBP 1.9 million over 22 days.

Authors estimated that the minority norm message generated the government GBP 1.9 million over 22 days. They conducted a second experiment to test further variations of norm messages and other types of information. You can read more about this in the article referenced below.

Reference

Michael Hallsworth, John A. List, Robert D. Metcalfe, and Ivo Vlaev. The behavioralist as tax collector: Using natural field experiments to enhance tax compliance. *Journal of Public Economics*. Apr 1(148) (2017):14-31.

5.2 Letters Increased Self-Reported Wages

Agency or program:

Social Security Administration (SSA), Supplemental Security Income (SSI) program

What was the improper payment?

Recipients are required to report to SSA any changes in circumstances, including a change in earnings, that could affect their eligibility in the program or the amount of their monthly payment. Failure to report changes in earnings accurately and promptly is a major cause of improper payments, which included over \$3.4 billion in overpayments for fiscal year 2015 alone. In order to reduce improper payments, SSA aimed to encourage more accurate and timely reporting of changes in earnings among SSI recipients.

What barriers were targeted?

- Knowledge/Ability: Not knowing about or forgetting income reporting responsibilities (this was targeted with letters, which serve as reminders)
- Motivation: Believing that income reporting was not necessary or not worthwhile (this was targeted by adding social information and penalty salience to some of the letters)



Researchers working for and with the SSA “develop a conservative estimate that the letters generated roughly \$5.91 in savings on average per dollar spent for the U.S. government.”

What was the intervention?

The SSA sent a letter reminding SSI recipients that they were responsible for reporting income changes. Four different letter versions were used:

- A basic letter with simple language about the need to report any information about earnings that might affect SSI payment amounts
- A social information letter with information about the reporting behavior of others (“Over 200,000 persons who receive SSI report new wages to us each month.”)
- A penalty salience letter that included additional language on the possible penalties from failure to report (“If you do not report your wages to us on purpose, we can stop your SSI payments.”)
- A combination letter that included both the social information and penalty salience components

What was the effect?

Letters were sent to 50,000 SSI recipients who were deemed by SSA as more likely to experience changes in their earnings. Three months after the letters were mailed, 1.30% of SSI recipients who were sent any of the four letters reported earnings for the previous three months, in comparison to 0.97% among those who were not sent a letter (control group). This represents a 0.34 percentage point increase in earnings reporting over the control group mean, after adjustment for several individual characteristics. The increase is equivalent to 132 additional SSI recipients reporting any earnings, and randomly assigned them to be sent one of the four letters or no letter (a control condition). A cost-benefit analysis suggests that the letters generated a reduction in overpayments of approximately \$5.91 per \$1 spent by SSA.

Reference

General Services Administration: Office of Evaluation Sciences. “Encouraging SSI Recipients to Self-Report Wage Changes” (2019). Retrieved from: <https://oes.gsa.gov/projects/ssi-wage-reporting/>

C. Yiwei Zhang, Jeffrey Hemmeter, Judd B. Kessler, Robert D. Metcalfe, and Robert Weathers. Nudging Timely Wage Reporting: Field Experimental Evidence from the United States Social Supplementary Income Program. *National Bureau of Economic Research* (2020), No. w27875. 2020.

5.3

Double-Checking Names to Improve Accuracy of Background Checks

Agency or program:

AmeriCorps

What was the improper payment?

AmeriCorps, the federal agency leading national service and community volunteerism, provides grant funding to nonprofit, tribal, faith-based, and community organizations who create and manage national service programs. Grantees are required to conduct national service criminal history checks for most national service participants and organization employees. The purpose of these checks is to detect certain statute-specified convictions that bar an individual from working or serving under an agency grant; however, noncompliance with process, timing, and documentation requirements can result in improper payment determinations. National service criminal history check compliance issues were the major contributor to AmeriCorps' total improper payments in its susceptible programs.

One common area of noncompliance was that the name entered to retrieve criminal history check results often did not match the name on government-issued IDs, typically due to grantees misspelling the name or using a nickname. These name errors meant that the criminal history check results were incomplete, and the payment was considered improper due to insufficient documentation.

To help grantees improve compliance, AmeriCorps contracted with a vendor to implement a centralized, standardized criminal history check process that any grantee may elect to use.

What barriers were targeted?

When requesting criminal history checks, grantees sometimes entered nicknames into the name field, or were not spelling names correctly.

What was the intervention?

AmeriCorps tracked name errors and found that implementing the centralized criminal history check system alone did not solve the name error issue. After conducting a root cause analysis, AmeriCorps had the vendor implement a data validation solution consisting of a double name entry system with help text that clearly stated that the name checked must match the government-issued photo ID.

The figure consists of two side-by-side panels illustrating a website form. The left panel, labeled 'before', shows a form with the following fields: 'Applicant name' with a single input box containing 'Applicant full name'; 'Applicant address' with three stacked input boxes containing 'Street address', 'State', and an empty box. The right panel, labeled 'after', shows the same form but with a yellow warning box at the top containing an exclamation mark icon and the text 'Note: Name entered below must match name on government-issued ID.' Below this, the 'Applicant name' section now has two stacked input boxes, both containing 'Applicant full name'.

Figure 16. Website mock-up showing the AmeriCorps criminal history check information entry screen before (left side) and after (right side) the changes.

What was the effect?

The availability of a centralized vendor that used name entry data validation contributed to name entry modification, combined with the centralized vendor, resulted in a 50% reduction in improper payments in FY19 to FY20 resulting from name entry errors for criminal history checks. In FY20, no improper payments stemming from name entry errors were identified in the payment integrity sample for those checks conducted in the centralized vendor after the implementation of the double name verification.

Reference:

AmeriCorps. FY2020 Annual Management Report, Washington, D.C., 20525. Retrieved from: https://americorps.gov/sites/default/files/document/AmeriCorps%20FY%202020%20Annual%20Management%20Report_508.pdf

5.4

CAPTCHA Messages did not Increase Tax Declarations

Agency or program:

In Guatemala, the Superintendencia de Administración Tributaria, Guatemala's Tax Authority

What was the improper payment?

This work targeted tax revenue collection rather than improper payments. However, the implications are relevant for government payments that rely on honest declarations from individuals.

Guatemalan taxpayers declare their incomes (for income tax) and sales of goods and services (for value added tax, VAT). Most of these declarations are made online.

What barriers were targeted?

Motivation: Believing that honest income reporting was not necessary or not worthwhile

What was the intervention?

Taxpayers were randomly assigned to the original CAPTCHA on the tax declaration website, or to one of six adapted versions:

- Enters name to confirm "I will fill out this form honestly"
- Sees an image of the Guatemalan flag and the message "In 2013 your taxes helped pay for schools, hospitals, and policemen"
- See an image of a gavel and the message "5060 taxpayers in early 2014 had legal proceedings for breach of their tax obligations"
- Chooses whether tax money is directed to schools, hospitals, or policemen
- Chooses whether people who fraudulently declare their tax should pay a fine, have assets confiscated, or go to jail
- Selects either "I am an honest taxpayer who declares truthfully" or "I'm a busy taxpayer who declares quickly"

What was the effect?

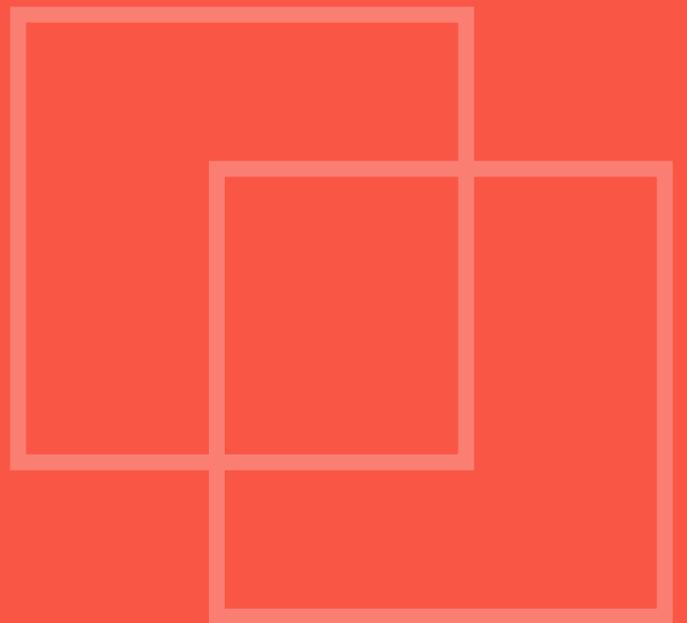
All taxpayers who made a declaration for income tax or VAT between August 2014 and January 2015 were randomly assigned to the basic CAPTCHA or to one of the six adapted versions. There were 627,242 taxpayers in the analysis. There was no significant difference in the amount of tax declared, or on the propensity to declare at all, by individuals who saw different CAPTCHA messages.

Researchers speculated that because all six treatments were ineffective, the setting may have been the problem. Taxpayers may perceive the CAPTCHA as separate from the tax filing, and go through it with little attention while rushing to get to the tax declaration. If they were made more engaging or were presented in a different context, messages like those tested here might have the intended effect.

Reference

Kettle, Stewart, Marco Hernandez, Michael Sanders, Oliver Hauser, and Simon Ruda. 2017. "Failure to CAPTCHA attention: Null results from an honesty priming experiment in Guatemala." *Behavioral Sciences* 7(no. 2) (2017): 28.

6. Additional Materials



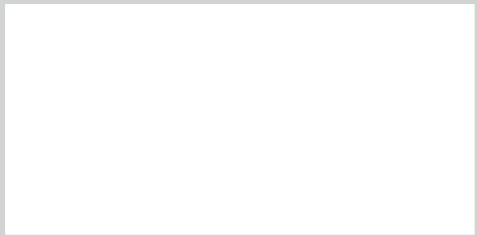
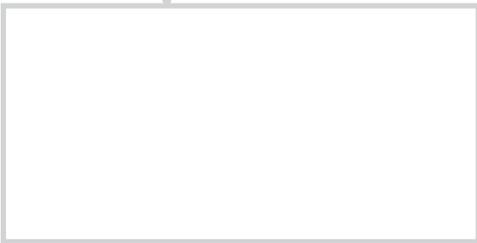
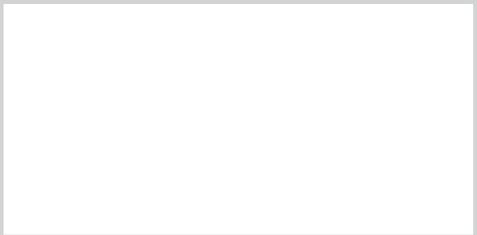
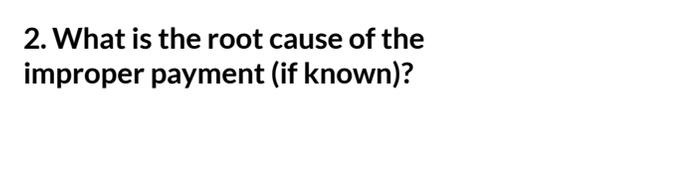
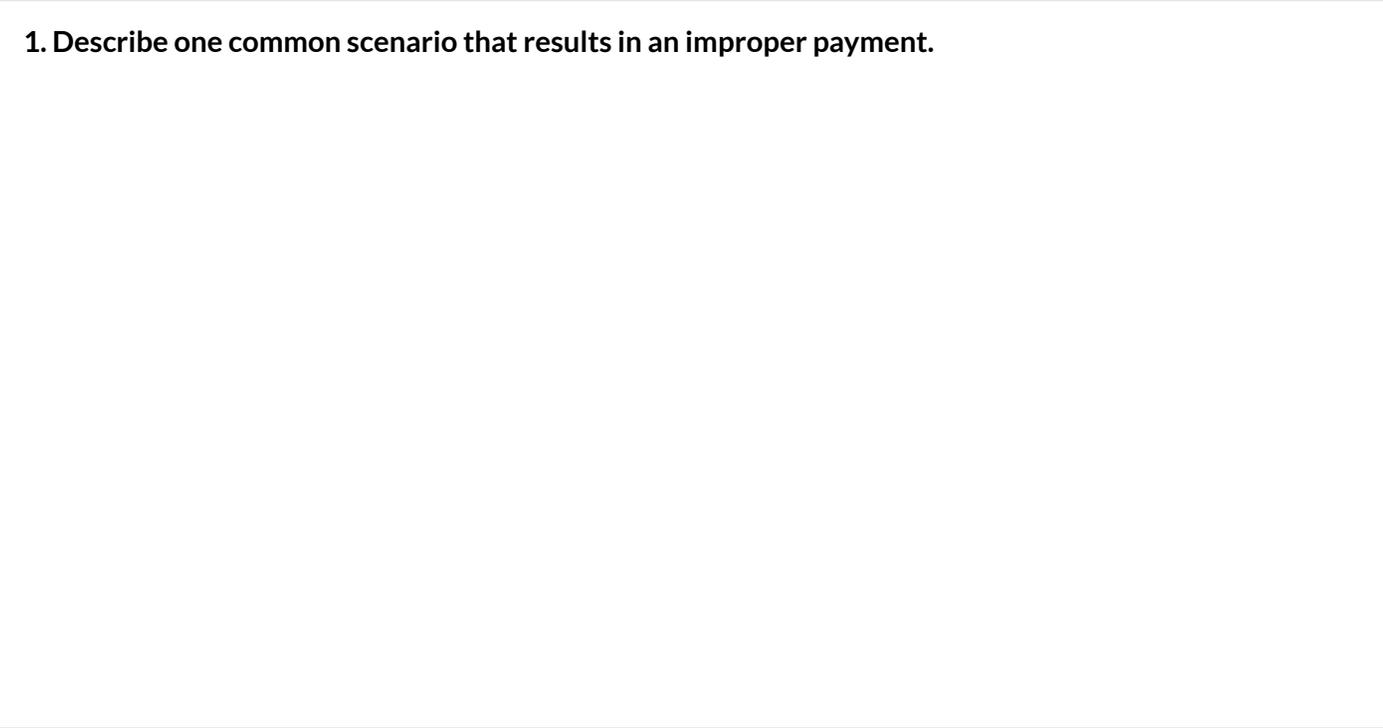
1. Identifying People

To get started, you'll need to focus on a particular improper payments scenario and the people involved.

1. Describe one common scenario that results in an improper payment.

2. What is the root cause of the improper payment (if known)?

3. Name each audience involved in the improper payment scenario.



2. Identifying Behaviors

This exercise will help you begin to think about your program's payment integrity from a behavioral perspective.

WHO is involved?

1. In the first column, write down each audience you identified in worksheet 1.

WHAT are they (not) doing?

2. For each person, write down anything they do in this scenario that contributes to the improper payment.

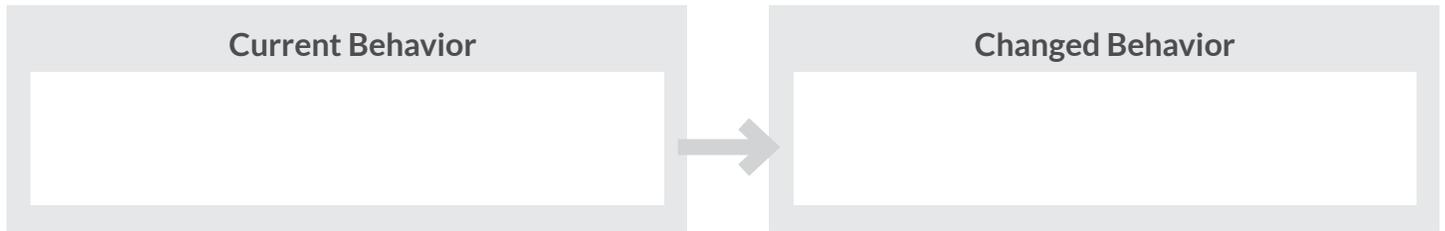
WHAT do they need to do?

3. For each behavior, write down a changed behavior that might help prevent the improper payment.

Audiences	Current Behaviors	Changed Behaviors

3. Identifying Barriers

In this exercise, we connect the dots between the behavior you've identified and the most promising approaches rooted in behavioral science.



WHAT is keeping _____ from doing the changed behavior?

People are not able to do it (perhaps due to not having the specific knowledge or skills to do it in that moment, or not remembering to do it).

Read more about how behavioral insights can address knowledge and ability barriers on page 39.

They don't have the opportunity to do it (perhaps due to insufficient time or resources, or incompatible social norms).

Read more about how behavioral insights can help create an environment that supports behavior change on page 40.

People are not motivated to do it (perhaps due to beliefs that other things are more important, or discomfort with the changed behavior).

Read more about how behavioral insights can help boost motivation on page 42.

4. Applying Behavioral Insights Principles

Worksheet 3 led you to some specific behavioral insights recommendations. This worksheet will help you think of ways the recommendations could be applied to your program.

Changed Behavior	
-------------------------	--

Behavioral insights we might apply

1. In the first column, write down the behavioral insights you are considering.

Where? To what?

2. Write where you will implement the behavioral insights, e.g. a form, letter, process, etc.

Change to make

3. Add more details to describe how you would implement the behavioral insights.

5. Assessing & Prioritizing Ideas

Let's start to think about the potential impact, feasibility, and risks of your ideas to help prioritize which to move forward with.

List your intervention ideas from worksheet 4 & rate ideas based on potential for impact and feasibility. Then, consider potential risks and limitations.

++ + - -- ?
Extremely Somewhat Not very Likely not Unknown
promising! promising promising promising

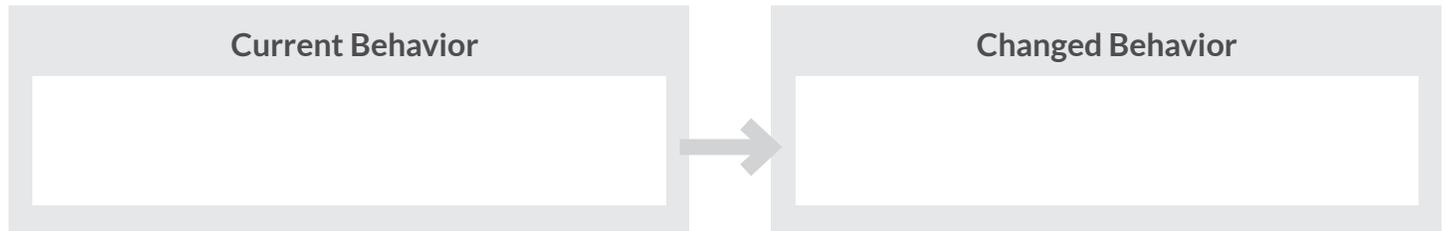
Behavioral intervention	Potential for impact?	Feasibility?	Potential risks and limitations

5. How, if at all, might you combine some of these ideas?

Interesting ideas? Go to worksheet 6 to further develop intervention concepts.

6. Detailing Your Intervention

Use this worksheet to describe your intervention ideas in detail.



<p>Format: How will you deliver your intervention?</p>	<p>Audience: Who will experience your intervention?</p>	<p>Timing: When does the intervention need to occur?</p>
---	--	---

Describe your intervention below

<p>Barriers your intervention is addressing</p>	<p>Behavioral insight(s) used</p>
--	--

7. Making it Happen

Now that you've designed your intervention, this worksheet will help you map out the concrete steps required to implement it and evaluate its effects, along with who you'll need to get on board, when.

	Steps	Dates	People
Plan intervention	Finish designing intervention using worksheets 1-6		
	Get any additional internal stakeholders on board		
	Finalize intervention		
	Determine resources required for implementation		
	Prepare resources for implementation		
	Implement intervention		
Evaluate intervention	When and who will measure who is doing what as a result of your intervention? (Outputs)		
	When and who will measure the impact on improper payments? (Outcomes)		
	When and who will report results and determine next steps?		

Want more detailed resources on evaluation? Check out OES's Evidence Act Toolkits at <https://oes.gsa.gov/toolkits/>.

6.2

Further Resources

This playbook is intended as a starting point. Here are some additional resources you could consult to learn more about various topics covered here.

Improper payments

- Payment Accuracy: <https://www.paymentaccuracy.gov/>
- [M-21-19, Appendix C to Circular No. A-123, Requirements for Payment Integrity Improvement](#) (March 5, 2021)

Behavioral insights principles

- [EAST: Four simple ways to apply behavioral insights](#)
- Thaler, Richard H., and Cass R. Sunstein. *Nudge: Improving decisions about health, wealth, and happiness*. Penguin, 2009.
- Kahneman, Daniel. *Thinking, fast and slow*. Macmillan, 2011.
- Mullainathan, Sendhil, and Eldar Shafir. *Scarcity: Why having too little means so much*. Macmillan, 2013.

Behavioral insights in government programs

- DOL Practitioners Playbook for Labor Programs: <https://www.dol.gov/agencies/oasp/evaluation/topic-areas/behavioral-interventions>
- IRS Behavioral Insights Toolkit: <https://www.irs.gov/pub/irs-soi/17rpirsbehavioralinsights.pdf>
- ACF/HHS Case Studies:
 - Behavioral Interventions to Advance Self-Sufficiency, 2010-2016: <https://www.acf.hhs.gov/opre/project/behavioral-interventions-advance-self-sufficiency-bias-2010-2016>
 - Behavioral Interventions to Advance Self-Sufficiency (BIAS) Research Portfolio: <https://www.acf.hhs.gov/opre/project/behavioral-interventions-advance-self-sufficiency-bias-research-portfolio>

Evaluation

- OES resources at <https://oes.gsa.gov/evaluationresources/>

Barriers

- [Mapping the cross-agency customer experience](#)
- Michie, Susan, Maartje M. Van Stralen, and Robert West. "The behaviour change wheel: a new method for characterising and designing behaviour change interventions." *Implementation science* 6, no. 1 (2011): 1-12.

Human-centered design

- [NYC-Civic Service Design](#)
- [Nesta/Ideo designing for public service](#)

6.3

Cause Categories and Behavioral Insights

Cause categories (previously referred to as Root Causes) developed by the OMB “help the program identify the correct path for the ‘why’ questions which will help determine the root cause, and ... help the program identify an effective direction for the mitigation strategy or corrective action.”⁶⁷ That is, the OMB cause categories are a starting point for designing corrective actions. If an agency determines that improper payments fall in the category “statutory requirements of program were not met,” they could then ask “Why weren’t we able to follow the statutory requirement?” This playbook describes an approach to these questions that focuses on human behavior and underlying drivers (e.g., knowledge, opportunity, motivation) as explanations.

In the section below, the cause categories, definitions, and examples are from M-21-19. We also give some suggestions about the underlying behavior barriers that might lead to these improper payments. [Section 3.1](#) in the playbook discusses those barriers.

Statutory requirements of program were not met

Definition: Payment made to an otherwise qualified recipient for the right amount but the payment process failed to meet all regulatory and / or statutory requirements. All Technically improper payments fall in this category.

Example: When a vendor is paid the contracted amount for services provided; however, the person authorizing the services did not have the legal authority needed from the contracting officer to authorize the services, or, when a vendor is paid the correct amount for services provided but the contract the agency used to secure the services did not meet all of the requirements in the Federal Acquisition Regulation.

Sample behavioral barriers

- **Knowledge:** A new program staff member does not know what authority was needed.
- **Opportunity:** Program staff are rushed and make mistakes.
- **Motivation:** Program staff aren’t motivated to take the time for accurate entry and documentation, perhaps because they don’t appreciate the importance of accuracy or have competing demands that feel more important.

⁶⁷ Office of Management and Budget. M-21-19, Appendix C to Circular No. A-123, Requirements for Payment Integrity Improvement (March 5, 2021). Retrieved from <https://www.whitehouse.gov/wp-content/uploads/2021/03/M-21-19.pdf>

Unable to determine whether proper or improper

Definition: A payment that could be either proper or improper but the agency is unable to determine as a result of insufficient or lack of documentation. All unknown payments (“UPs”) fall in this category.

Example: When an agency is required to verify income prior to issuing a payment to a beneficiary and a beneficiary’s case file lacks updated income information or pay stubs and the agency has no other way of verifying whether a change in income has occurred since the last time they issued a benefit. The beneficiary may still be qualified to receive benefits, but they might have also had an increase or decrease in income affecting their eligibility for the program. Therefore, because the reviewer does not have the information needed (updated income) during the time of the review, it is unknown whether an overpayment or underpayment has been made.

Sample behavioral barriers

- **Opportunity:** The beneficiary application form does not notify applicants when they leave a field blank, so they submit an incomplete application.
- **Motivation:** A program staff member feels bad at the prospect of an applicant not getting benefits because they do not have access to the necessary documentation, so confirms the payment anyway.

Data / information needed does not exist

Definition: A situation in which there is no known database, dataset or location currently in existence that contains the data/information needed to validate the payment accuracy prior to making the payment.

Example: When a recipient’s eligibility is dependent on the length of time a child spent with their guardian—no database or dataset is currently in existence containing this type of information; when a medical provider fails to provide proof of a broken leg (required by statute or regulation) to support a claim—no database or location is currently in existence containing x-rays or any other type of information that can confirm a leg is actually broken.

Inability to access data / information

Definition: A situation in which the data or information needed to validate payment accuracy exists but the agency or entity making the payment does not have access to it.

Example: When a statutory constraint prevents a program from being able to access information that would help prevent IPs (for example, not confirming a recipient's earnings or work status through existing databases due to statutory constraints, or, a beneficiary failing to provide an agency with information on earnings, and the agency does not have access to databases containing the earnings information).

Sample behavioral barriers

- **Opportunity or motivation:** A program beneficiary does not remember to bring the documents required to confirm eligibility.

Failure to access data / information

Definition: Improper payments are attributed to human errors to access the appropriate data/information to determine whether or not a beneficiary or recipient should be receiving a payment, even though such data / information exists and is accessible to the agency or entity making the payment.

Example: When an agency with access to the death master file fails to verify eligibility prior to approving entitlements; when an entity has access to the information that would verify a beneficiary's household income and the entity making the payment does not check that information prior to payment.

Sample behavioral barriers

- **Opportunity:** A program staff member does not have time to follow up on missing eligibility data without falling behind on assessing new applicants. Or, an agency has insufficient funding to pay for the number of staff needed to verify all payments.
- **Motivation:** A program staff member plans to wait until the end of the week to follow up on missing documentation, but ends up too busy to do as planned.

6.4

How this Playbook was Made

In the course of developing this playbook, team members from the Office of Evaluation Sciences interviewed people from several agencies whose work touched on improper payments. We spoke with them about common scenarios, mitigation strategies, and forms of guidance that might be helpful. We are very grateful to those who took the time to talk with us.

We also appreciate the team members, research assistants, colleagues, and contacts who contributed to this work, read drafts, and provided invaluable comments.