



EVIDENCE TOOLKIT

Using Behavioral Science Insights to Inform Programs and Policies

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What you need to know about using behavioral science insights to inform programs and policies

- Behavioral science is the study of how people make decisions; it can be applied to improve policy development and implementation.
- Behavioral science insights can be used to increase uptake of available services and to design programs and policies to help consumers better navigate complex decisions.
- Using behavioral science techniques to develop and test interventions can be a cost-effective way to improve outcomes and promote evidence building through testing and data analysis.
- Although interest in behavioral science has grown sharply in recent years, its use in the public sector is still developing.

What are behavioral science insights?

Behavioral science is the study of how people make choices and act upon them. Instead of assuming people are perfectly rational and always make decisions in their best interests, the field uses lessons from psychological research that show that most people are susceptible to personal biases, logical fallacies, and heuristics. The private sector has [long relied on](#) behavioral science insights to develop effective business practices and refine service delivery. Increasingly, researchers and policymakers are applying lessons from the field to government programs and policies.

In the social sector, providing services does not always ensure that people can or will access them: lack of awareness, complex eligibility criteria, involved application processes, and challenging language can compound to produce significant barriers to program enrollment by eligible people. In other words, the ways that many government programs are structured frequently do not align with how people make decisions. Further, living in difficult circumstances can cause an increased cognitive load that makes long-term planning more difficult for vulnerable populations.¹ Interventions that apply behavioral science insights can help alleviate these challenges and better connect people to needed services.

Many of the behavioral interventions used to address these issues can be described as “nudges.” As defined by Cass Sunstein and Richard Thaler, nudges “alter people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives.”² Behavioral interventions can take many forms. The SIMPLER model developed by the [Behavioral Interventions to Advance Self-Sufficiency \(BIAS\) Project](#) at the US Department of Health and Human Services, for example, develops techniques that draw upon behavioral factors in seven areas: social influence, implementation prompting, meeting deadlines,

¹ Anandi Mani, Sendhil Mullainathan, Aldar Shafir, and Jiaying Zhao, “Poverty Impedes Cognitive Function” *Science* 341 no. 6149 (2013): 976–80.

² Cass Sunstein and Richard Thaler, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (New Haven, CT: Yale University Press, 2008), 6.

personalizing appeals to encourage behavior, loss aversion, ease of processes, and reminders to complete actions.

For example, a career-training program in Los Angeles tested messaging that demonstrated the effect of loss aversion. The program found that people were more likely to attend a required appointment when they were sent a notice that they could lose benefits if they failed to attend. People who were told that attendance would allow them to retain the same dollar amount of benefits showed up at lower rates.³

Behavioral interventions used in government often focus on increasing take-up of available resources, but they can be applied in pursuit of other goals, such as increasing compliance rates, [improving project delivery in a governmental department](#), and increasing the [quality of providers selected](#). Behavioral science offers opportunities for policymakers to boost the impact of government programs when their effectiveness depends on people's choices, often without substantial added expenditures.

How do behavioral science insights promote evidence-based policymaking?

Developing new behaviorally informed approaches can offer great opportunities for evidence building. Most applications of behavioral insights involve assessment and evaluation, such as [low-cost randomized controlled trials](#) and rapid-cycle testing. For example, all initiatives undertaken by the [White House's Social and Behavioral Sciences Team](#), now the [Office of Evaluation Sciences](#) in the General Services Administration, were designed as randomized controlled trials to build reliable evidence about effective program design. Because many behaviorally informed changes are relatively small (e.g., shifting the timing of a prompt to renew retirement elections, rewording emails, adjusting default settings), constructing a treatment and control group or several test groups for [A/B testing](#) is often simple.

For example, a department debating different email wording choices to promote take-up of a particular program can randomly assign all recipients on the email list to one of several differently worded emails and monitor each group's rate of program enrollment. These experiments can be piloted and analyzed in a short period, with the results informing revisions that can then be tested. Even when intervention design or available resources preclude a randomized controlled trial, "other tools and data collection techniques such as laboratory experiments, observation studies, design workshops, or usability research could be conducted."⁴

Whether or not an individual intervention creates statistically significant change, evaluating its effects generates data that governments can use to inform and improve future program implementation.

³ Lashawn Richburg-Hayes, Caitlin Anzelone, and Nadine Dechausay, with Patrick Landers, "[Nudging Change in Human Services](#)," Behavioral Interventions to Advance Self-Sufficiency (BIAS) Project, accessed May 28, 2018, 55.

⁴ Richburg-Hayes et al., 62.

Where have behavioral science insights been used?

Government agencies and nonprofit organizations around the world, such as the [Behavioural Insights Team in the United Kingdom](#), the aforementioned Office of Evaluation Sciences, and [ideas42](#), have investigated the potential of behavioral science insights to design more effective government policies and improve service delivery across a broad range of problems at the local, federal, and international levels. These applications include [shifting advertising strategies to recruit a more diverse group of applicants to be police officers](#), targeting school leaders to implement a breakfast program to [ensure more kids are getting the necessary nutrition](#), and providing education to reduce the [prevalence of HIV infection among sub-Saharan African women](#).

Effective implementations of behavioral science can have the following effects:

- **Make government programs more *efficient*.** To reduce unemployment insurance fraud and overpayments, the State of New Mexico set up a system to match data between state records, such as job information input by employers, and the unemployment insurance system. This allowed the state to more effectively identify insurance fraud and overpayments, leading to \$10 million in savings. When cost savings from this system plateaued, New Mexico partnered with a consulting firm to [prevent unemployment insurance overpayments before they occurred](#). They implemented pop-up boxes at key decisionmaking “pressure points” that contained messages influencing claimants to accurately report information. The pop-up boxes reduced unemployment insurance fraud from more than 5 percent to 2.9 percent and yielded key insights into claimants’ decisionmaking that can be used in future government activities.
- **Make government programs more *impactful*.** Although the federal government’s retirement contribution plan, the Thrift Savings Plan, has an 87 percent take-up rate among civilian federal members, military employees at the Department of Defense enroll in the Thrift Savings Plan at half that rate. The Department of Defense partnered with the White House Social and Behavioral Sciences Team to implement a three-pronged approach to [boost retirement security for service members](#): active enrollment choice among those already in service, targeted email messages to boost enrollment and contributions, and automatic enrollment for new service members. The five-week pilot of active enrollment choice yielded an 8.3 percent increase in Thrift Savings Plan enrollment, and the email messages led to nearly 5,000 new enrollments and \$1.0 million in retirement savings in just the first month. Automatic enrollment was enabled by the 2015 National Defense Authorization Act; it is being rolled out in 2018 and will continue to be monitored. This approach mirrors [retirement savings interventions](#) that are among the most statistically significant, widely adopted, and well-researched behavioral science nudges across the public and private sectors.

What are the opportunities and limitations for using social and behavioral insights to inform policy?

Many behavioral interventions to date, particularly in the public sector, have focused on take-up of services. The future of behavioral insights involves applying these techniques to address broader problems and to affect other steps in the policy process. There are many ways to expand use of these insights, such as the following:

- **Applying them at different scales.** Interventions are often designed to alter the individual decisionmaking of staff or clients, but they can be designed to target the systems in which people operate, such as communities, organizations, or family units. Given the importance of social influence in decisionmaking, interventions that acknowledge a person’s broader context can be especially effective.⁵ Smoking cessation efforts are a powerful example of the effects of scale: smoking bans in public spaces can shift culture and create a social barrier that works in concert with the individual deterrent of graphic warnings on cigarette packages.⁶
- **Applying them to different policy areas.** Most government interventions to date have involved social services and the provision of benefits. However, the process of identifying a barrier, isolating what might be causing it, using behavioral science strategies to design solutions, and testing and refining them based on data is applicable to many of the problems governments address, such as [public health](#) and [energy conservation](#).
- **Applying them to different stages in the policy process.** The impact of behavioral science can sometimes be enhanced by shifting from changes in implementation, such as using a phone call to prompt individuals to fill out a form, to changes in design, such as eliminating the need for the form entirely. Behavioral science insights can speed program adoption and the delivery of services, but they can also be built into the way programs are developed. For example, instead of incentivizing guardians to enroll their children into free and reduced-price lunch programs, the US Department of Agriculture’s Food and Nutrition Services piloted a program that allowed states to use Medicaid data to enroll eligible students automatically.⁷

The large amount of data government collects represents an opportunity to use behavioral intervention insights; linking information about the services people receive, for instance, can improve targeting efforts and reduce the paperwork and time needed from clients. Instead of requiring people to self-report, agencies and programs can use behavioral insights to better identify clients and smooth the process of connecting them with services.

Because many behavioral science interventions are less time-, energy-, or cost-intensive, incorporating them into government activities and programs often carries low political, reputational, and financial risk. But although the actual techniques may not be resource-intensive, the collaboration, implementation monitoring,

⁵ Richburg-Hayes et al., 63.

⁶ George Loewenstein and Nick Chater, “[Putting Nudges In Perspective](#),” *Behavioral Public Policy* 1 no. 1 (2017): 35–36.

⁷ National Science and Technology Council, “[Social and Behavioral Sciences Team: Annual Report](#)” (Washington, DC: Executive Office of the President, 2016), IX.

and evaluation required of these interventions can be. Consequently, buy-in from agency leaders is important for testing even small changes.⁸

In addition to support from leadership, staff commitment and sufficient resources at the program level are essential to successfully implementing these interventions. Because behavioral interventions may upend long-standing procedures and counter preconceived notions about what works best, staff must understand the value of testing and be willing to experiment with new approaches. Additional staff time may be required to implement an intervention, collect and analyze data and iterate in response to it, and meet increased demand if the intervention is successful. Outdated technology can also be an obstacle for the public and nonprofit sectors. A pilot project to reduce hold times and attrition for the National Domestic Violence Hotline, for instance, was “suspended because of a technology disruption that precluded a reliable method of implementing the intervention.”⁹

Finally, focusing on incremental changes through behaviorally informed approaches risks masking the need for larger, more systemic reforms.¹⁰ Although behavioral insights are a promising tool, they are not a comprehensive solution—positive outcomes from incorporating nudges into policies and programs are often modest. But “because behavioral changes often require little or no additional cost, returns on investment can be large even when project effects are small.”¹¹ Nudges are best applied in situations where the cost of not taking an action can be made clearer, where feedback can help people better understand the effects of their decisions, where complex processes can be simplified, and where default options can be altered to incentivize the most beneficial choice.¹² Evaluation results of nudge interventions are best used for incremental adjustment and improvement to program processes. Even where more comprehensive policy-level changes are ultimately needed, behavioral interventions can still move the needle, achieving measurable progress and generating data that can inform all stages policymaking.

⁸ Richburg-Hayes et al., 66, 73.

⁹ Richburg-Hayes et al., 75, 17.

¹⁰ George Loewenstein and Peter Ubel, “Economics Behaving Badly,” *New York Times*, July 14, 2010.

¹¹ National Science and Technology Council, “Social and Behavioral Sciences Team: Annual Report” (Washington, DC: Executive Office of the President, 2015), XII.

¹² Francesca Gino, “Why the U.S. Government is Embracing Behavioral Science,” *Harvard Business Review*, September 18, 2015.

Where can I learn more?

- Richard Thaler and Cass Sunstein’s book, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, and Daniel Kahneman’s *Thinking Fast and Slow* provide a comprehensive introduction to behavioral science insights.
- The Social and Behavioral Science Team put out a [2015 Annual Report](#) and a [2016 Annual Report](#) that illustrate the range of efforts behavioral science insights can and have been applied to in government.
- The Behavioural Insights Team in the United Kingdom continues to pilot behavioral insights interventions to redesign public services, developing a [suite of resources](#) for interested parties.
- The organization ideas42 uses behavioral science to address issues such as [financial aid for university](#), [water conservation](#), and [cybersecurity](#) around the world.
- Raj Chetty’s “[Behavioral Economics and Public Policy: A Pragmatic Perspective](#)” discusses how behavioral economics fits into economics as a whole and how it can contribute to public policy.



BROOKINGS



With support from the Laura and John Arnold Foundation, researchers from the Urban Institute, Brookings Institution, American Enterprise Institute, and the Pew-MacArthur Results First Initiative have formed the Evidence-Based Policymaking Collaborative. The Collaborative brings together researchers from organizations across the ideological spectrum to create tools to support evidence-based policymaking at the federal level. The Collaborative's work is assisted by an Advisory Group consisting of stakeholders throughout the evidence-based policymaking field. The opinions expressed in this brief do not necessarily reflect the views of all members of the Evidence-Based Policymaking Collaborative or its funder. Cover photo by Dusit/Shutterstock.