

# Behavioural Insights in Ontario

## Update Report 2018



BIU | Behavioural Insights Unit



"By properly deploying both incentives and nudges, we can improve our ability to improve people's lives, and help solve many of society's major problems. And we can do so while still insisting on everyone's freedom to choose."

RICHARD H. THALER & CASS R. SUNSTEIN



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#### Minister's Message



It is with great pleasure that I present the first ever report back on the use of behavioural insights in Ontario.

Ontario is one of the first jurisdictions in Canada to leverage behavioural sciences to improve outcomes and deliver better services. By seeking to understand how people make decisions and act upon those decisions, governments can design and re-design public services that better reflect how people respond to, engage with and use these services.

Applying behavioural science insights can mean making public services easier to access, by simplifying forms and processes, as well as helping citizens make more informed choices by clearly presenting options and offering timely reminders. Programs and services work best when they are designed with the people who use them in mind.

"By testing what works and just as importantly what doesn't, through pilot projects, experts in behavioural science are helping design programs that are made to work for Ontarians." The use of these insights in Ontario and other jurisdictions have been shown to result in public services that deliver better outcomes, often at a lower cost. By testing what works and just as importantly what doesn't, through pilot projects, experts in behavioural science are helping design programs that are made to work for Ontarians.

Over the past three years, there have been a number of notable accomplishments which are outlined in this report. I am eager to build on our success and harness the full potential of behavioural insights.

To date, we have focused on implementing behavioural insights in four priority areas: health promotion, digital government, reducing poverty and streamlining government regulations. However, behavioural insights can be applied to a diverse range of policy challenges and we will continue to pursue these opportunities as well. I believe that with small changes we can achieve big results.

I would like to thank the members of Ontario's Behavioural Insights Unit for their continuing commitment to doing a job not many people know about, but many people benefit from.

**Eleanor McMahon** President of the Treasury Board Minister Responsible for Digital Government

Many of the public policy challenges the province faces are best met by changing human decisions and behaviours for the better. Whether the objective is to make it easier for Ontarians to stay healthy, recycle, or use government services, bringing about changes in their behaviour is fundamental. Behavioural science research provides insights into how people make decisions and act on them, and suggests strategies for changing behaviour through behaviourally informed design.

The Behavioural Insights Unit (BIU) was the first of its kind in Canada. The BIU utilizes cutting-edge behavioural sciences knowledge and methodology to provide effective solutions across different policy areas in the Ontario government, and with broader public sector partners.

Since its official inception in 2015, the BIU has used the scientific method to generate evidence to improve outcomes in health, environment, and government services.

The BIU's current focus is to continue working in these areas as well as to expand the use of the behavioural insights approach in domains such as education, child care, and increasing equitable access to the labour market.

#### Most Notable Accomplishments



**143%** increase in organ and tissue donor registrations.

#### Increasing Organ Donation Consent Rates

Simplified form content and changed timing around the handing out of the form.

# **13,057** more vehicle licence plate sticker renewals completed online.



#### Shifting Licence Plate Sticker Renewal from Paper to Online

Changed content of renewal notices.



**82%** increase in correct recycling of organics.

**40%** increase in employer health returns filed within 10 days.





**\$500K** projected costs avoided while maintaining conversion rates to new photo health card.

**144%** increase in traffic to the Ministry of Labour's website.



#### Improving Recycling Behaviour

Designed new bin labels to clarify content and get people thinking about recycling.

# Increasing Timely Collection of the Employer Health Tax

Changed reminder letters to provide clear and action-oriented information about how and when to pay.

#### Promoting Uptake of the Photo Health Insurance Card

Designed new behaviourally informed letters and tested the effectiveness of reminder notices.

#### Increase Consumer Protection Against Underground Roofing Economy

Tested the performance of various ad messages on Google and Kijiji to direct homeowners searching for a roofer to a webpage with useful tips and information. Behavioural science research provides insights into how people make decisions. Behavioural insights incorporate findings and methodologies from psychology, cognitive science, and neuroscience to better understand behaviour. When this scientific approach is applied to the delivery of public services, these insights can help governments design and promote services that reflect people's needs and perspectives, making them more accessible and ultimately easier to use.

One example of how behavioural insights might be used involves simplifying forms and processes. People are more likely to decide to do something that is easy than to do something that is difficult and frustrating. Another example would be helping citizens make more informed choices by clearly presenting options and offering timely reminders. Programs and services work best when they are designed, and presented, with the people who use them in mind. The use of behavioural insights in jurisdictions such as the United Kingdom, Australia and the United States, has been shown to result in public services that deliver better outcomes, often at a lower cost.

#### The Behavioural Insights Unit

Ontario's Behavioural Insights Unit (BIU) was officially created in 2015, with a mandate to enhance public services by leveraging behavioural science research. It is the first government unit dedicated to the practice of behavioural insights in Canada.

The BIU is part of the Centre of Excellence for Evidence-Based Decision Making within the Treasury Board Secretariat and supports the application of a behavioural science lens in policy development and program implementation. This means building capacity, providing advisory services, and designing and evaluating solutions. The BIU often collaborates with academic partners who provide expert advice in the design and evaluation of policies and programs.

Behavioural insights is applicable to a wide variety of domains, and the BIU works collaboratively with numerous ministries, agencies and other levels of government.

To build capacity, the BIU provides advisory services and attracts and inspires potential partners through innovative education and outreach. The BIU helps partners apply insights from the behavioural sciences to design and implement policies and programs that are more effective, efficient, and human-centric.

Part of the BIU's mission is to inform the government, partners and prospective partners, as well as the public, about the progress it is making, and the policies or programs that have been shaped and influenced. This is the BIU's first update report detailing notable accomplishments and ongoing work.

#### Methodology

The BIU works to design and support programs that work for Ontarians. This is important because Ontario is geographically vast and culturally diverse, and what works in other jurisdictions may not always work in this province. By testing what works, and what does not through pilot projects, the BIU helps its partners develop and apply solutions that are specifically designed and made to work for Ontarians.

Together with potential partners, the BIU looks for opportunities to apply behavioural insights methodologies to improve policy and program design. First, the project team identifies and clarifies the behaviour the partner is seeking to change – for example, increasing the number of clients completing a registration form. Then the team identifies existing barriers using multiple tools to

The evaluation method considered the gold standard in behavioural science is the randomized controlled trial.

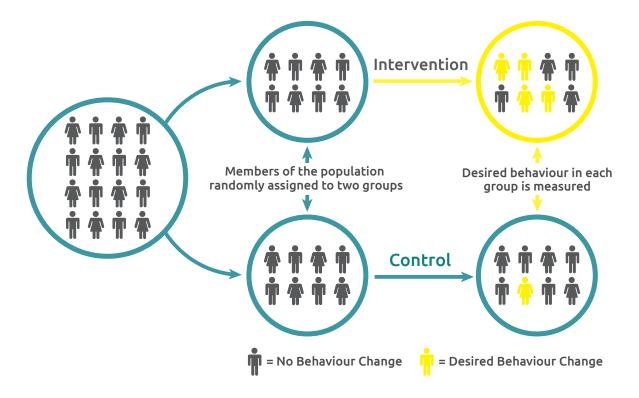
understand the context from the client's perspective – for example, the registration form may be too long and complicated. The BIU works with partners to determine touchpoints that could be targets for an intervention – such as registration forms that could be simplified. The BIU then pilots different versions of these, using randomized controlled trials which are summarized in more detail below, to determine the best intervention and develop Ontario-specific knowledge and evidence. Finally, the BIU works with partners to implement and scale up the winning intervention.

#### What is a Randomized Controlled Trial?

Given the complexity of human behaviour, careful and rigorous testing is fundamental to the behavioural insights approach. The evaluation method considered the gold standard in behavioural science is the randomized controlled trial. The point is to identify a particular approach, or intervention, and then test different variations of that intervention against a status-quo control in order to evaluate its effectiveness. In other words, it compares doing something in a new way, using the intervention, with doing things the way they have always been done. In both cases, the behaviour of interest, such as accessing a service, filling out a form, or registering information online, is measured to see whether the intervention was more successful than the status quo.

Suppose, for example, there is a service or program for which people need to register, with the desired outcome being to increase registration. The BIU would establish a





Adapted from "Test, Learn, Adapt: Developing Public Policy with Randomised Controlled Trials" by UK Cabinet Office, Behavioural Insights Team, 2012

pool of randomly-selected participants from members of the public who are accessing registration forms. Half the participants would be randomly assigned to receive the intervention – forms that had been simplified and made easier to fill out. The other half would be randomly assigned to receive the control – the usual forms. If more of the participants who received the simplified form end up registering, that would indicate that simplifying paperwork might be a good way to increase registration.

The approaches studied and tested by the BIU are sometimes more complex than the example cited above, but the underlying principle of randomized controlled trials – trying different variations of something to see what works – remains the same. Nudging, the process of indirectly suggesting or highlighting a certain behaviour without using regulations or forced compliance, is commonly used in behavioural insights. Nudges help preserve people's freedom of choice since they are not subject to punishments, fines, or other negative consequences if they choose not to act a certain way. Nudges come in multiple forms including making key points salient with the use of colour or larger fonts; simplifying forms and processes; and reminding people of their commitments by sending motivational and well-timed reminders.

Behavioural science insights and interventions encourage and guide behaviour change in an ethical manner. The BIU uses an ethics framework that guides its work to ensure honesty and fairness, and ensure that the work is applied with the best interests of Ontarians in mind. Behavioural insights is:

- applied in a way so as not to prioritize the well-being of one group of individuals over the well-being of another group
- utilized in a way that does not impede the existing choices that people have
- free of deception and misrepresentation, and incorporates the highest standards of fairness

# update

Since its official inception in 2015, the BIU has used behavioural science to generate insights that can help improve outcomes in health, environment, and government services. The current focus is to continue to work in these areas as well to expand the use of the behavioural insights approach to diverse domains and challenges throughout government.

# report

#### Accomplishments



### Increasing Organ Donation Consent Rates

**143%** increase in organ and tissue donor registrations

#### **Background and Objectives**

There are currently more than 1,500 people in Ontario on the waiting list for a life-saving organ transplant.<sup>i</sup> Every three days, one of them dies. In order to solve this problem, we must increase organ donation consent rates in Ontario.

At first glance, finding a solution should be easy. After all, 85 per cent of Ontarians support organ donation. However, at the time this pilot was proposed, only 26 per cent of Ontarians were registered organ donors. The challenge was to determine if behavioural insights could help close this gap.

#### **Trial Design**

Ontario uses a prompted-choice system to register organ and tissue donors. What that means is that Ontarians are asked whether they want to register as a donor when they are at ServiceOntario centres, conducting health card, driver's licence or photo card transactions. The BIU worked with the Ontario Ministry of Health and Long Term Care, Trillium Gift of Life Network, the Ministry of Government and Consumer Services and the University of Toronto's Centre for Behavioural Economics in Action at Rotman (BEAR) to conduct a trial at one large ServiceOntario Centre in the Greater Toronto Area, testing different interventions to see if more people could be induced to register when asked about becoming a donor.

The project team used four types of interventions:

- Simplification: the current donor registration form was simplified
- Timing: the form was handed out sooner, at the reception desk, rather than the service counter
- Information: the Trillium Gift of Life Network brochure was handed out, which was previously not done
- Nudging: one of three different nudge statements was added in the green box at the top of the simplified form

**Nudge 1 highlighted reciprocity and fairness:** "If you needed a transplant, would you have one? If so, please help save lives and register today."

**Nudge 2 highlighted affect and personal relevance:** "How would you feel if you or your loved one needed a transplant and couldn't get one? Please help save lives and register today."

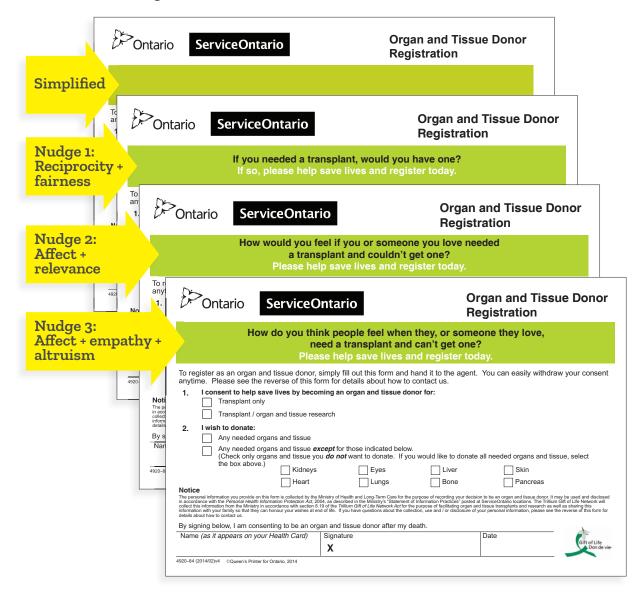
**Nudge 3 highlighted affect, empathy and altruism:** "How do you think people feel when they, or someone they love, need a transplant and can't get one? Please help save lives and register today."

The trial ran for eight weeks and more than 10,000 people took part. The first two weeks, the project team used the control – the original form and process. The next four weeks, they tested interventions. The final two weeks were given over to post-experiment control data.

#### Figure 2: Control – Original form

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tissue. The Ministry will use the information about your decision and disclose it to the Trillium Gift of Life Network for the			I wish to donate any needed organs or tissue <b>except</b> for those indicated below. (Check only organs and tissue you <b>do not</b> want to donate. If you would like to donate all needed organs and tissue, leave these boxes blank.)				
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change or withdraw your consent at any time in writing by going online to <b>ServiceOntario.ca/BeADonor</b> , going to a ServiceOntario centre or writing to the address above.		0	I am consenting to be an organ and tissue donor after my death.				
Notice the personal information you provide on this form is collected by the Ministry of Health and Long-Term Care for the purpose of recording your decision to be an organ and tissue donor. It may be used and disclosed in accordance with the Personal Health Information Protection Act. 2004. as described in the Ministry's Statement of Information Practices <sup>®</sup> , which are available at Ontario.ca/health. In didition, the Trillium Gilt of Life Network will collect this information from the Ministry for the purpose of facilitating organ and tissue transplants and research in Ontario in accordance with section 8.19 of the Trillium Gilt of Life Network Act.		be an the	Signature		Date		
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Figure 3: All new notices – Simplified form, Nudge 1, Nudge 2 and Nudge 3



#### **Key Findings**

The trial was extremely successful. During the trial organ donor registration rates increased by 143 per cent. Results indicated that handing out the brochure with a simplified form made it 2.3 times more likely that people would register compared to the control condition, and Nudge statements 1 and 2 made it 2.1 times more likely that people would register compared to the control condition. All of this was done in a very cost-effective and time-efficient manner. If these successful changes were implemented across Ontario, they could garner more than 450,000 new registrations annually, approximately 200,000 more than the status quo.

### Next Step: Exploring New Avenues to Increase Organ Donor Consent Rates

What the trial showed is that simple changes to timing and content of forms can result in substantially higher organ donor registration rates. In addition, people respond to being prompted, either by being handed a brochure or nudged with a simple question or statement. As a next step the BIU is examining how different interactions with customers can influence organ donation. Data are currently being collected and trial results are expected by the fall of 2018. What the trial showed is that simple changes to timing and content of forms can result in substantially higher organ donor registration rates.



Shifting Licence Plate Sticker Renewals from Paper to Online – #1

**13,057** more vehicle licence plate sticker renewals completed online.

#### **Background and Objectives**

In 2012, 87 per cent of Canadians reported that they shop online<sup>ii</sup> and Canadians also reported that they would be interested in accessing government services online.<sup>iii</sup> Despite that interest, however, a surprisingly low number of Ontarians use government services online. In the case of vehicle licence renewals, for example, in 2013, just 10.4 per cent of the 6.5 million requests for licence plate stickers were made online. This despite the fact that all vehicle owners are sent renewal notices that include reminders of the availability of online renewal services. Given that digital transactions are less expensive than those conducted in person or via mail, the BIU took on the challenge of making the reminders more effective.

#### **Trial Design**

Working in conjunction with ServiceOntario and University of Toronto's Centre for Behavioural Economics in Action at Rotman (BEAR), the BIU designed three interventions that included nudge statements based on established principles of behavioural insights. The goal was to increase the number of online transactions simply by modifying the messaging that accompanied the renewal notices. Nudge 1 used colour to increase the salience of the online channel and introduced new messaging on the exterior of the forms: "Click. Print. Drive. Instant and easy renewal online at ServiceOntario.ca/StickerRenewal." Capturing people's attention by using more salient cues such as colour has been shown to encourage behaviour change.

Nudge 2 increased the salience of the online channel and presented a gain frame by adding five reasons why vehicle owners might be motivated to renew their licence plate stickers online: "save travel time; save waiting time; renew in the comfort of your own home" etc. Letting people know why they should do something, or what they can gain from it, can be an effective tactic to change behaviour.

Nudge 3 increased the salience of the online channel and warned of potential loss by adding four points that reminded vehicle owners of the time they would lose if they did not renew their licence plate stickers online: "travel to ServiceOntario centre; wait in line; talk to agents" etc. This version of the form was based on the well-documented effect of loss aversion that shows that people do not like losing what they already have.

Over the course of eight weeks, the BIU conducted a randomized cluster trial involving 600,000 licence plate sticker renewal notices. Every week, vehicle owners were sent either the control – the standard renewal notice or a notice that included one of the three interventions.

Figure 4: Exterior of notice – Standard messaging and salience change to messaging

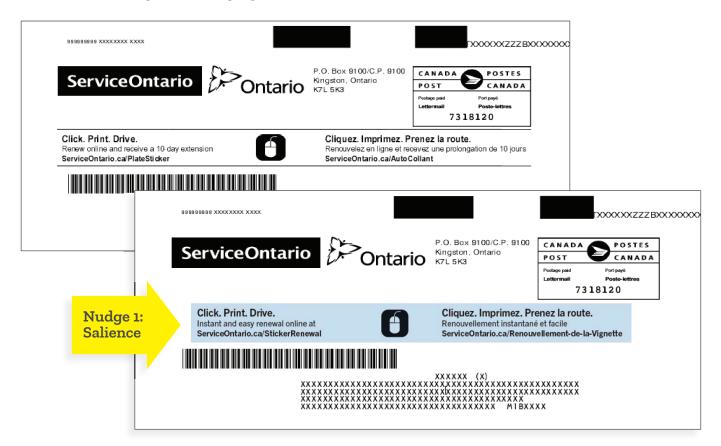
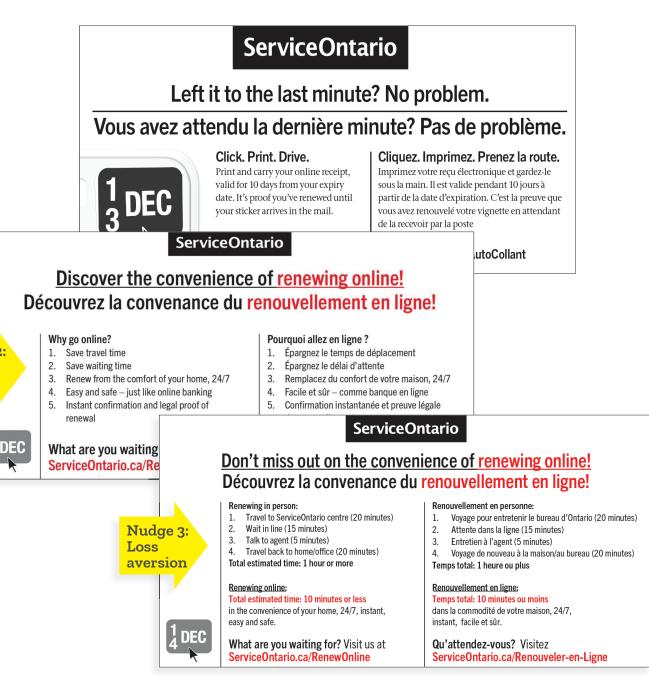


Figure 5: Interior of notice – Standard messaging, gain frame messaging and loss aversion messaging



Nudge 2:

Gain

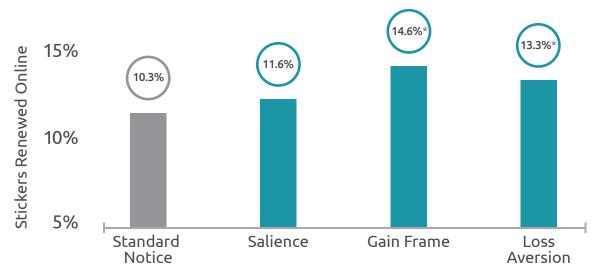
frame

#### **Key Findings**

All three interventions resulted in significantly more online transactions than the standard renewal notice. In total, during the eight-week pilot, 13,057 more licence plate stickers were renewed online because of the interventions. The best performing

#### All three interventions resulted in significantly more online transactions than the standard renewal notice.

intervention was Nudge 2 that highlighted the five reasons to renew online. This increased online renewals by 4.3 per cent compared to the control. This pilot was cost-free and saved the government approximately \$28,053 by reducing the number of in-person transactions in favour of online transactions during the trial.



#### Figure 6 : Increased online licence plate sticker renewals with new notices

\* Statistically significant at the .05 level



Shifting Licence Plate Sticker Renewals from Paper to Online – #2

**46%** increase in online renewals and a **2.5%** increase in renewing on time.

#### **Background and Objectives**

The previous project showed that small behaviourally informed changes could help ServiceOntario successfully remind people about the online renewal option. In this subsequent trial, the BIU showed that replacing the renewal form with a behaviourally informed notice clearly promoting online renewals could drive even more people online.

#### **Trial Design**

In November 2016, ServiceOntario, University of Toronto's Centre for Behavioural Economics in Action at Rotman (BEAR) and the BIU tested several renewal notices that had been designed to encourage people to renew their licence plate stickers online and in a timely fashion. The original renewal notice, which was the subject of testing in trial one, was designed to support in-person renewals, filled out in pen and submitted in person to a customer service representative. Despite the fact that online renewal was presented as an option, the entire renewal package conveyed the impression that in-person renewals were the most appropriate channel. The simplified notices were designed to promote online renewal first, and in-person renewal second.

The project team tested seven notices. One was the control – the original notice. The second was a simplified notice promoting online renewal first, and the other five were simplified notices that promoted online renewals which also contained nudge statements.

Nudge 1 featured a completion bias: "Cross this off your to-do list today. Renew online!"

Nudge 2 presented a gain frame: "Save time by skipping the lines. Renew online!"

Nudge 3 warned of potential loss: "Don't waste time standing in lines. Renew online!"

**Nudge 4 highlighted social consistency:** "Thousands of people already renew online. Why not renew online too?"

**Nudge 5 offered internal consistency:** "You probably already shop and bank online. Why not renew online too?"

The trial ran for two weeks and 240,677 trial notices that had been designed to encourage people to renew their licence plate stickers online and in a timely fashion were sent.

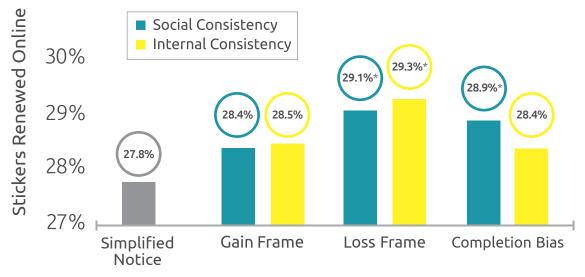
#### **Key Findings**

During the randomized controlled trial, the new renewal notice resulted in a 46 per cent increase in online renewals, relative to the original notice, and a 2.5 per cent increase in renewing on time.

Adding nudge statements to the notices further increased online renewals by 5.4 per cent relative to the notices without nudges. The notices that emphasized loss and internal consistency, (Nudge 3 and 5) performed the best. The best performing nudge statements have been added to the letter and with this addition, ServiceOntario projects 450,000 additional online renewals will occur annually.

During the randomized controlled trial, the new renewal notice resulted in a 46 per cent increase in online renewals, relative to the original notice, and a 2.5 per cent increase in renewing on time.





\* Statistically significant at the .05 level



# Modifying Bin Labels to Increase Accurate Recyling Behaviour

**82%** increase in correct recycling of organics.

#### **Background and Objectives**

Ontarians dispose of approximately eight million tons of waste every year.<sup>iv</sup> That waste ends up in landfills, which produce harmful methane emissions.<sup>v</sup> It is known that recycling can reduce waste entering landfills, thereby reducing emissions and conserving resources.<sup>v</sup> While many Ontarians support recycling, this support does not always translate into action. The BIU partnered with the Ministry of Environment and Climate Change to see if the team could change this behaviour gap by testing different variations of public spaces waste and recycling bin labels to see what leads to more recycling accuracy (e.g. placing waste in the correct bins).

#### **Trial Design**

The BIU ran an eight-week randomized controlled trial in the jury selection room in the Superior Court of Justice building in Toronto. Potential jurors are an ideal sample from a scientific perspective, since they are randomly selected members from the community. The project team tested the performance of four different sets of bin labels for two weeks each and statistically analyzed the results to determine which label had the greatest impact on reducing contamination in bins.

Of the four label design sets, one was the control set – the labels already in use in the jury room. The other three label sets contained nudges.

Nudge 1 used simplicity in the form of simple text and straightforward icons to engage System 1 thinking, which is fast, automatic, intuitive, emotional and sometimes unconscious.

Nudge 2 used simple icons similar to Nudge 1 but also used a statement to engage more "deeper" System 2 thinking, which is slower, driven by deliberation and logic. For example, the trash bin label said, "When you put something in the garbage it goes to a landfill. Thanks for sorting your waste."

Nudge 3 incorporated a question to most deeply engage cognitively deliberative System 2 thinking. For example, the trash bin label said, "Does it belong in the garbage?"

Figure 8: Control – Standard labels used in courthouse jury selection room



Figure 9: Nudge 1 – Simple labels used to facilitate System 1 thinking



Figure 10: Nudge 2 – Labels with statements about consequences of improper sorting used to engage System 2 thinking



Figure 11: Nudge 3 – Labels asking questions about sorting accuracy to engage deepest System 2 thinking



#### **Key Findings**

All the new labels increased accurate recycling rates, with the question label, Nudge 3 performing particularly well. The question label increased correct organics recycling by 82 per cent, led to 55 per cent more coffee cups being disposed appropriately, and increased accurate recycling of mixed containers by 32 per cent relative to the control labels. The analysis indicates that using the question label throughout the entire courthouse would lead to over 12,503 fewer pounds of contamination annually.

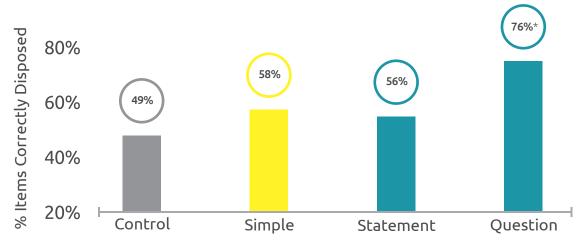
The analysis indicates that using the question label throughout the entire courthouse would lead to over 12,503 fewer pounds of contamination annually. Currently, these findings are being shared with jurisdictions and organizations across Canada to encourage use and further piloting of the new label designs.



Figure 12 : All labels increased correct sorting of organics, with greatest increase with Question label

items by the total number of items in each bin.

Figure 13 : Question labels resulted in the greatest increase in correct sorting of coffee cups



\* Statistically significant at the .05 level. NOTE: Calculated by dividing number of correctly disposed items by the total number of items in each bin.



# Increasing Timely Collection of Employer Health Tax

**40%** increase in employer health returns filed within 10 days.

#### **Background and Objectives**

The Employer Health Tax is a payroll tax that is levied on employers. Although there are mounting financial penalties and interest charges if this tax is not paid by the annual deadline, approximately nine per cent of employers are late filing their returns every year. This is clearly not good for employers who have to pay additional amounts on top of their taxes, nor is it good for the Ministry of Finance, which incurs significant costs collecting outstanding taxes. The BIU worked with the Ministry of Finance to find ways of encouraging employers to file their late returns more quickly.

#### **Trial Design**

The Ministry of Finance sends out a requirement-to-file letter to employers in Ontario who are late filing their returns. The project team ran a randomized controlled trial and tested two letters. The first was the control – the standard letter – and the second was a new simplified version of that letter.

The control letter informed organizations that their tax return had not been received by the March 15 due date, that the return must be filed immediately to prevent further charges and a referral to the collections branch, and that continued failure to file was a serious offence.

The new simplified letter contained the same information, but also included a new deadline, and step-by-step instructions of how and where to file a return. It also used simplified and concrete language, and was written in active voice.

To determine whether this intervention would have consistent year-over-year results on which the Ministry of Finance could rely, this trial was run for two consecutive years.

#### **Key Findings**

Overall, this pilot demonstrated that these low-cost changes to the tax-collection letters had significant benefits for collecting taxes. Results show that simplifying communications and providing concrete instructions that are written in an active voice can be effective in promoting timely tax payment.

The trial was conducted over two sequential years, and in the first year of the trial, the results were clear. Employers who received the intervention letter were 40 per cent more likely to file their annual return before the start of additional collection

efforts than were employers who received the standard letter. As a consequence, \$288,336 more tax revenue was collected and the Ministry of Finance saved approximately \$5,767 in collection costs.

A similar pattern of results held in the second year of the trial. Again employers were 40 per cent more likely to file without the need for additional collections efforts if they received the intervention letter rather than the standard letter, and this helped the Ministry of Finance avoid \$6,182 in collection costs. The success in the second year is important, because it showed that employers receiving the simplified letter for the second Results show that simplifying communications and providing concrete instructions that are written in an active voice can be effective in promoting timely tax payment.

year in a row once again filed their taxes. This indicates that the Ministry of Finance should be able to rely on the intervention to consistently help employers file their returns more quickly.



# Promoting Uptake of the Photo Health Insurance Card

**\$500K** projected costs avoided while maintaining conversion rates to new health card.

#### **Background and Objectives**

As of April 2015, there were approximately 2.5 million health cards in Ontario that lacked photo identification and other enhanced security measures. Converting these old red and white health cards to the photo health card is an important way of protecting our public health care system against fraud. For various reasons, however, it has been difficult to get Ontarians to replace their old cards.

The BIU worked with ServiceOntario, University of Toronto's Centre for Behavioural Economics in Action at Rotman (BEAR), the Ministry of Health and Long-Term Care and Cabinet Office to see if the number of conversions from the white and red health card to the newer, more secure photo health card could be increased.

#### **Trial Design**

In May 2015, the project team launched a randomized controlled trial. Four voluntary conversion notices were tested, which asked people to switch their old red and white health cards for the photo health cards. One was the control – the original notice – and the other three were simplified notices that included nudge statements and critical information such as deadlines. In addition, an envelope with specific messaging to maximize health card conversions was tested.

**Nudge 1 employed social norms** "4 out of 5 Ontarians already have a photo health card," and a rationale for action "advance security features." It also explicitly mentioned the elimination of the red and white health cards.

Nudge 2 was the same as Nudge 1, but added a specific deadline.

Nudge 3 added the behavioural insight principle of personalization of risk and protection: "you are one of the few people at higher risk for fraudulent health card use."

Reminder notices were sent seven weeks after the initial voluntary conversion notice.

#### **Key Findings**

The trial was a success. All trial notices produced significantly more conversions

All trial notices produced significantly more conversions than the standard notice, with the best performing notices leading to a 15 per cent increase in health card conversion compared to the standard notices.

than the standard notice, with the best performing notices leading to a 15 per cent increase in health card conversion compared to the standard notices. Importantly, the changes made to the wording of the notices were so effective that even without a subsequent reminder notice they performed as well as the control notice with a reminder. As a result, Nudge 2 without a reminder was implemented, thus avoiding more than \$500,000 in printing and mailing costs, when compared to the original notice plus a reminder.



## Increase Consumer Protection Against Underground Roofing Economy

**144%** increase in traffic to the Ministry of Labour's website

#### **Background and Objectives**

Canada's underground economy is huge. It is estimated that \$40.9 billion of economic activity goes unreported every year, which means it also goes untaxed. The largest sector in the underground economy is construction, which accounts for 28 per cent of total underground economic activity.<sup>vi</sup>

One of the reasons it is so hard to tackle the problem of the underground economy is that many Canadians, according to surveys, regard paying cash in order to avoid paying tax as socially acceptable. The BIU partnered with the Ministries of Labour, Government and Consumer Services and Finance to create an online advertising campaign designed to make homeowners aware of the risks inherent in the underground economy.

#### **Trial Design**

Together with academic collaborators from the University of Toronto's Rotman School of Management and Queen's University Business School, the project team designed 16 advertisements for this campaign. The ads targeted people searching for roofers on Google or Kijiji, and all were intended to nudge and direct those people to the Ministry of Labour's website. Research has shown that people are often unmotivated to contribute to public goods and as noted above, public opinion research has shown that many Canadians view HST evasion as socially acceptable. Therefore, instead of focusing on the tax angle, each of the advertisements spoke to well-recognized consumer motivations.

Nudge 1 played to homeowners' immediate motivation – choosing an appropriate roofer. These ads conveyed to prospective buyers that the Ministry of Labour's website provides impartial information which can help homeowners make an optimal choice.

Nudge 2 employed homeowners' financial motivation, which is always to find a good or service for the lowest possible price. These ads recognized this financial motivation and then illustrated how cash deals actually undermine it.

Nudge 3 reminded homeowners of their ultimate motivation, protecting their home. Fear of danger powerfully motivates action. In this case, the ads suggested, the action was to visit the Ministry of Labour site.

Nudge 4 again used homeowners' ultimate motivation, this time suggesting how they might avoid risks or damage to their homes. People are risk averse, which means that they pay more attention to, and are highly motivated to avoid potential dangers in their environments. These ads hint at the various scams and dangers associated with shady contractors, and urge homeowners not to "be the next victim."

Nudge 5 used trust, by conveying source legitimacy: All of the advertisements explicitly mention that the messaging comes from the Ontario government to evoke feelings of trust. During the course of the trial the advertisements on Google and Kijiji resulted in an additional 3,299 visits to the Ministry of Labour website, a 144 per cent increase in traffic to the site relative to traffic from all other sources.

To evaluate the effectiveness of the advertising messaging two randomized controlled trials were conducted, one on Google and one on Kijiji. The trials ran for 34 days at the start of the 2015 roofing season. During this time the advertisements received 4,297,485 impressions (were displayed this many times) and the Ministry of Labour's web development team tracked the resulting 5,970 visitors to their web page.

#### **Key Findings**

Overall the pilot was a success and showed that well-designed online advertising campaigns can help increase Ontarians' awareness about the pitfalls of engaging in the underground economy. During the course of the trial the advertisements on Google and Kijiji resulted in an additional 3,299 visits to the Ministry of Labour website, a 144 per cent increase in traffic to the site relative to traffic from all other sources. If just 1.2 per cent of these visits resulted in roof replacements that were not conducted in the underground economy these advertisements would have paid for themselves in sales tax alone.

Over the past three years, the BIU has made great strides in incorporating behavioural insights into solutions to some of government's most pressing challenges. The BIU has also demonstrated that an evidence-based approach using the scientific method can improve outcomes at a low or no net cost to our partners. As word spreads about this novel approach to policy, the BIU has been asked to conduct trials to improve the health and well-being of Ontarians, increase uptake of government e-services, and decrease regulatory burden. What follows are some examples of the BIU's current projects.

#### Increasing Hand Hygiene in Hospitals

There is a clear link between hand washing and preventing the spread of disease. In health care settings that link is extremely important as many patients are particularly vulnerable to infection. For that reason, health care workers are expected to maintain excellent, and consistent, hand hygiene.

The BIU recently partnered with St. Michael's Hospital in Toronto to work with their infection prevention and control experts to try to bridge the gap between awareness and action. The challenge will be to find ways of making hand hygiene opportunities more salient and central to health care workers' sense of occupational identity.

#### Increasing Cervical Cancer Screening Rates for Eligible Women

Every year, about 1,500 women in Canada are diagnosed with cervical cancer. Every day, on average, someone dies from it. This is particularly tragic because cervical cancer is almost 100 per cent preventable with the HPV vaccine, regular screening and appropriate follow up.

In Ontario, Cancer Care Ontario runs the Ontario Cervical Cancer Screening Program (OCSP). The OCSP sends correspondence to women to help women and their primary care providers stay up to date with routine cervical screening and follow-up. The provincial target for cervical screening participation is 85 per cent for women age 21 to 69, but currently only about 61 per cent of women in that age group are up to date for routine cervical screening. Cancer Care Ontario and the Ministry of Health and Long-Term Care have asked the BIU to explore ways of increasing that number.

The initial focus will be on designing improved invitation letters, which will be sent primarily to women who have not been screened in the last 5 years. There has been work done on this problem in other jurisdictions that may prove useful. One project in particular, in Australia, improved screening rates by 9 per cent, simply by adjusting the reminder letter.

# Decrease Inappropriate Opioid Prescribing by Physicians

The opioid crisis in Ontario, as in other jurisdictions, is a tragic, growing, and complex issue. Although many different approaches and solutions will be required, current thinking suggests that there may be a role for behavioural science in giving physicians the tools they need to prescribe opioids appropriately.

The BIU is working in partnership with Health Quality Ontario – the provincial advisor on quality in health care – as well as researchers at Women's College Hospital and the Ministry of Health and Long Term Care, to increase uptake of opioid prescription feedback amongst physicians. The hope is that more effective engagement with physicians will lead to more appropriate prescribing and better patient outcomes.

### Shifting to Online Health Card Renewal

Currently, people needing to renew their health cards have to do so in person at a ServiceOntario centre. This can be a time-consuming process compared to conducting a transaction online. It can be especially challenging for those without easy access to a centre.

Approximately 780,000 Ontarians are eligible for online health card renewals per year through the new online Health Card and Driver's Licence Renewal service. Online renewals increase choice and convenience for Ontarians, enhance program integrity by shifting low-complexity and low-risk transactions online, and generate savings.

The BIU is working with ServiceOntario and the Ministry of Health and Long-Term Care, to explore ways to enhance the effectiveness of renewal notices to increase online service uptake, increase timely health card renewals, and improve customer experience.

#### Increasing Online Vaccination Reporting for Children

Ontario has a new secure system, called Immunization Connect Ontario (ICON) that allows students and their parents to submit children's vaccination records online. Reporting online is an administratively efficient and user-friendly way to help ensure that students' immunizations are up-to-date. This protects their health and the health of those around them. It also reduces the number of students who get suspended from school each year for missing vaccinations or having out-of-date records.

In partnership with Toronto Public Health, the BIU is working to increase the number of students and parents who update their vaccine records online using ICON.

#### **Increasing Municipal Fine Payment**

Municipalities in Ontario are responsible for the enforcement and collection of Provincial Offences Act defaulted fines and are owed approximately \$1.4 billion. Defaulted fines can result in enforcement actions for individuals who do not pay, including licence suspensions, additional fees, and credit score reductions.

Applying behavioural science to fine reminder notices may make it easier for some Ontarians to pay their fines in a timely manner, and avoid more severe collections measures down the road. The BIU is working with the Ministry of Attorney General and the Regional Municipality of York on a project to find ways of doing just that.

#### Increasing Child Care Centre Compliance

The Ministry of Education conducts regular inspections at child care centres across Ontario, to ensure compliance with health and safety requirements set out in regulation. Currently, some child care centres in this province are non-compliant in key areas.

The BIU is working with the Ministry of Education to explore opportunities to improve overall compliance across the province, in order to improve services for children and families accessing licensed child care, reduce administrative burdens and increase government efficiency.

### **Increasing Use of Family Mediation Services**

Family mediation is a way of helping people resolve issues relating to parenting and property disputes during a separation or divorce. This includes issues around custody of or access to children, child and spousal support and property division. Mediation can benefit parents and children by avoiding the cost and stress of going to court, reaching a quicker resolution and minimizing family conflict after the breakdown of a relationship.

The BIU is working in partnership with the Ministry of the Attorney General to explore ways to increase uptake of mediation before families get to court.

## Towards More Balanced Parental Involvement in Childcare

Encouraging the uptake of parental leave by fathers is a complex issue. It is widely accepted that it is a good and fair thing; it allows men to play an important early parenting role, and helps to equalize male and female representation in both the workforce and child care. However, it can also be complicated by parental desires and preferences, couple dynamics, societal beliefs about gender roles at home and in the workplace, employment and financial considerations, the presence or absence of leave entitlements, availability of affordable child care and other factors.

The BIU has been working with the Ministry of Labour's Gender Wage Gap Unit, exploring ways to learn more about parental leave behaviour, and specifically about ways to increase uptake of parental leave amongst men. The aim is to learn more about the behavioural barriers to parental leave uptake, and potentially make it easier for fathers to understand and use the options available to them. In addition to running behavioural science trials, the BIU offers advisory services to a wide range of public sector organizations. There are cases where running trials is either unfeasible or undesirable due to factors such as logistical barriers to trial execution, inadequate sample size, or broader policy goals that do not have a clear behavioural metric with which to evaluate outcomes. In these cases, advisory services are useful in helping these organizations apply behavioural insights to their work.

# Increasing Clarity and Simplicity of Client Letters and Forms

The BIU worked with the Ministry of Community and Social Services, Family Responsibility Office to redesign some of their client letters and forms. Using the principles of behavioural insights and user-centric design, the project team aimed to increase client reporting accuracy by making the forms clearer and simpler.

#### **Decreasing Unnecessary Antibiotic Prescribing**

Choosing Wisely Canada is a campaign to help clinicians and patients engage in conversations about unnecessary tests and treatments, and make smart and effective care choices. The BIU worked with Choosing Wisely to address the issue of unnecessary antibiotic prescribing by physicians. Previous studies have shown that pledge posters in the examination rooms of doctor's offices are an effective strategy to reduce antibiotic prescribing rates. Accordingly, the BIU helped Choosing Wisely Canada incorporate a signature box into their posters for doctor's offices to encourage physicians to only prescribe antibiotics when necessary. Signature boxes leverage the behavioural science concept that individuals wish to behave consistently across situations, so signing in agreement with a principle or idea on one day makes it more likely that a corresponding action will be carried out on another day.

### **Increasing Adoption of Reloadable Payment Card**

The Ontario Disability Support Program (ODSP) has introduced an alternate electronic payment method – a reloadable payment card (RPC) – for clients who are unable to open or maintain a bank account to receive social assistance by the ministry's preferred method of payment, direct bank deposit (DBD). In April 2016, the Ministry of Community and Social Services began phasing out paper cheques in ODSP. However, as of December 2016, nine per cent of clients (nearly 30,000) were still receiving paper cheques, and only one per cent used a RPC. The BIU was asked by the Ministry of Community and Social Services to help encourage DBD and RPC adoption as methods of payment.

Project team members developed a phone campaign that proved to be very successful, and also suggested to the ministry that another way to move clients away from paper cheques would be the creation of an express line at a few busy ODSP offices on cheque pick-up day. The shorter wait times would create an incentive for clients to switch to DBD or RPC. The Hamilton office implemented this idea in April 2017 and was able to issue 27 RPCs during the high volume cheque pick up days.

#### **Increasing Resilience Against Phishing Attacks**

The Ontario Government, like all organizations, faces nearly constant email phishing attacks targeting its employees. Although several mechanisms are in place to block suspicious emails from reaching employees' inboxes, it is not possible to prevent all these emails from getting through. The BIU is working with the Cyber Security Division of Treasury Board Secretariat to evaluate how best to provide Ontario Public Service employees with the tools and resources they need to recognize and effectively defend against phishing attacks.

#### **Creating an Online Immunization Scheduling Tool**

Participation in vaccine programs is an individual choice, and the vast majority of parents do choose to have their children immunized. However, the complexity of these programs can make it difficult for busy parents to keep track of them. With limited time and attention, keeping on top of the Ontario immunization schedule can be challenging for even the most organized parents.

For this reason, the BIU suggested to the Ministry of Health and Long-Term Care and Cabinet Office that a custom vaccine scheduling tool be created. This tool would help parents identify vaccine dates for their children, and also send them calendar reminders when their kids are due for their next vaccine. The BIU has introduced behavioural science to more than 6,000 members of the Ontario Public Service and the broader public sector through more than 120 workshops and seminars. Although the BIU has educated and worked with many ministries and teams throughout the Ontario Public Service, instilling knowledge of behavioural insights and having ministries adopt the methodology into their own work is necessary to ensure user-centric and evidence-based decision making in the Ontario government.

The BIU has introduced behavioural science to more than 6,000 members of the Ontario Public Service and the broader public sector through more than 120 workshops and seminars. Accordingly, the BIU has developed and run a number of innovative capacity-building initiatives to provide ministries with the necessary education, tools, and supports they need to learn to design and run their own behavioural insights trials.

In 2017, the BIU ran The Nudge Challenge, an intensive learning program designed to teach behavioural insights concepts and build behavioural insights capacity across the Ontario Public Service. Participants representing 14 different ministries attended

workshops and learned about and applied the principles and tools of behavioural insights. Participants were given the opportunity to present their proposals to senior management and colleagues.

The BIU has shared knowledge by participating and presenting at conferences, including: Climate Change Game Jam 2017; Municipal Innovators Community 2017; Ontario Municipal Tax Revenue Association (OMTRA); Southern Ontario Behavioural Decision Research (2017 & 2016); Behavioural Decision Research (2016); Behavioural Science and Policy Association annual conference; Behavioural Exchange Conference (2016); ESDC Service Research Conference (2016); IPAC Annual Conference (2016); and Behavioural Economics for the Public Sector (2016). In March 2018, the BIU co-hosted Canada's first national conference on behavioural insights. The "2018 Behavioural Insights In Canada Conference" was a collaboration between The Impact and Innovation Unit, Privy Council Office, Government of Canada, University of Toronto's Centre for Behavioural Economics in Action at Rotman (BEAR), the British Columbia Behavioural Insights Group and the Behavioral Science and Policy Association.

The BIU is in the process of developing a comprehensive toolkit to support ministry and broader public sector partners with the application of knowledge and methodologies of behavioural insights. The purpose of the toolkit is to facilitate partners' thinking about their challenges and corresponding solutions in terms of the behaviours of interest and evidence generation to draw conclusions about implementation. The toolkit will help partners identify measurable behavioural challenges, understand the context and create a "behavioural map" identifying the decision points throughout a process, generate potential solutions, and trial the results to generate evidence. The BIU is still a very young unit, but it has already begun changing not just the way government designs policies, but the way government thinks about designing policies. The BIU recognizes, however, that there is not only a great deal left to do, there is also a great deal left to learn.

Behavioural insights constitute a real innovation in policy design and execution. The essence of innovation is trying to do things in new and different ways, and that

requires boldness and a willingness to occasionally try something that does not work. Indeed, the things that do not work can often be as revelatory as those that do. With every project, the BIU generates evidence that can be used not only in that specific situation, but also in others down the road. Every successful project is a learning experience, as is every unsuccessful project.

The things that do not work can often be as revelatory as those that do.

The BIU focus to date has been on health, environment, and government services. But as the BIU becomes more established, it will expand its work to other domains such as education, diversity and inclusion, and child care. The BIU will continue to draw upon work done in other jurisdictions around the world to inform its approach, and expects that one day other jurisdictions will look to Ontario for ideas and inspiration.

The BIU's mandate is in line with many of the commitments made in the November 2017, Federal, Provincial and Territorial Declaration on Public Sector Innovation. The BIU is committed to applying new insights to improve policies, programs and services as well as the scientific process to measure what works and does not work. The BIU will continue to work on behalf of citizens to build better public services for all Ontarians.

For more information about the Behavioural Insights Unit, please see their website at https://www.ontario.ca/page/behavioural-science-insights-pilot-projects. The BIU can be reached at: biu.tbs@ontario.ca.

<sup>i</sup> Trillium Gift of Life Network (2017, December). *Registration Stats*. Retrieved from https://beadonor.ca/ scoreboard.

<sup>ii</sup> Statistics Canada (2012). *Canadian Internet Use Survey*. Retrieved from http://www.statcan.gc.ca/dailyquotidien/131126/dq131126d-eng.htm.

<sup>iii</sup> PricewaterhouseCoopers (2014) Next Generation of Eservices: Enhancing Service Delivery in the Canadian Public Sector: PricewaterhouseCoopers International Limited.

<sup>iv</sup> Statistics Canada (2017, March). Materials Diverted, by Type, Canada, Provinces and Territories Every 2 Years (tonnes). Retrieved from http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=1530043.

\* Environment Canada (2006). National Inventory Report: Greenhouse Gas Sources and Sinks in Canada 1990 to 2004: Gatineau, QC: Government of Canada.

<sup>vi</sup> Morissette, C. (2014). The underground economy in Canada, 1992 to 2011. *Income and Expenditure Technical Series, Research Paper No.* 73. Retrieved from http://www.statcan.gc.ca/pub/13-604-m/13-604-m2014073-eng.pdf.



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