

Behavioural Insights in NSW


Update Report 2016




Premier & Cabinet
Behavioural Insights Unit

ACHIEVEMENTS

Since our last full report in 2014, the Behavioural Insights Unit has:

7,500 
more women projected
to attend cervical
cancer screenings

changed a reminder letter, which could lead to an additional 7,500 women attending their cervical cancer screenings each year

\$66,000+
expected cost
savings in
just one hospital 

trials new text messages to get people to attend their hospital appointments, projected to save just one hospital at least \$66,000 per year

9.4%
more tenants
exited arrears 

showed that an effective reminder text message can help social housing tenants pay off their rental debt, with 9.4 per cent more tenants exiting arrears compared to those that were not sent a text message (from 68.8 per cent to 75.3 per cent)

ADVOs
easier to
understand 

developed and rolled out a plain English Apprehended Domestic Violence Order

**Promoting use
of behavioural
insights** 

provided advice on incorporating behavioural principles into a wide range of policy areas

WHAT ARE BEHAVIOURAL INSIGHTS?

We know from our own lives that we often fail to do what is best for us, despite our good intentions — whether it be exercising regularly, saving money or eating healthily. This has important implications for public policy. Behavioural Insights (BI) draws on the behavioural sciences to help us understand how people act and make decisions in everyday life — ways that are often different from those assumed in standard economic models. This helps us design public services and policies in ways that work with the way people actually behave and help people make better decisions for themselves and for society.

“We enhance the lives of the people of NSW by using behavioural insights to improve the effectiveness of public services and policy.”

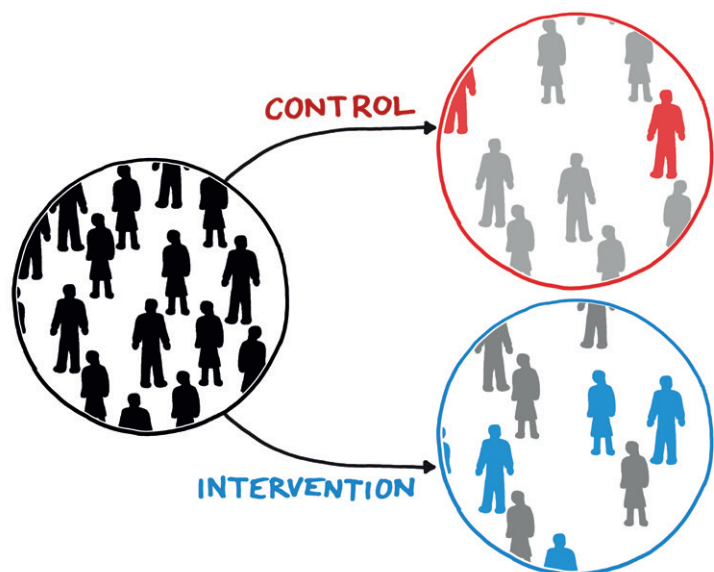
WHO ARE WE?

The Behavioural Insights Unit (BIU) works across the NSW Government helping to improve the effectiveness of public services and policy by applying what we know about the way people think and act.

BIU sits within the NSW Department of Premier and Cabinet (DPC) and was established in 2012. We continue to be supported by the UK Behavioural Insights Team and we are increasingly collaborating with international and Australian academics on projects.

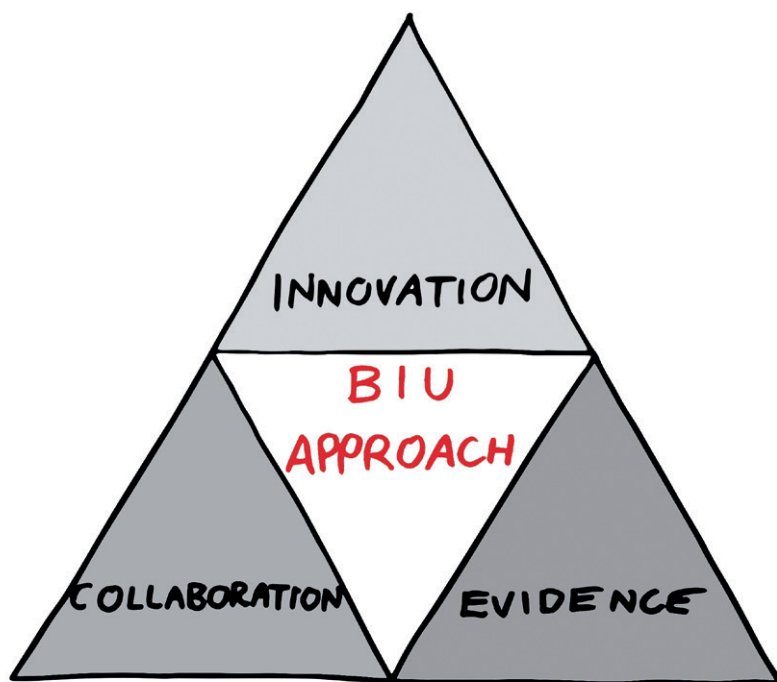
We take an empirical approach, spending much of our time developing and running trials to determine what works before supporting the wider roll-out of successful interventions. Wherever possible, we apply the ‘gold standard’ of evidence, the randomised controlled trial (RCT). RCTs allow us to test the effectiveness of an intervention compared to what would have happened if we had changed nothing, which gives us the highest possible confidence that the difference between the intervention and control groups is actually caused by the intervention. The process of randomly allocating participants to the intervention and control groups is also a powerful way of reducing potential biases in the trial.

Where it is not possible to run an RCT, we use other evidence-based approaches such as before-and-after studies. As well as developing and trialling improvements to services, we also provide advice to agencies about incorporating behavioural principles into their programs and policies.



All our research and evaluation activities undergo a process of ethical review in line with Australian Standards set by the National Health and Medical Research Council. This is important to ensure that any potential risks or ethical, privacy and consent issues that could affect trial participants are fully understood and mitigated before any work is done.

We published our first full report in 2014.¹ Since then, we have run more experimental trials examining ways to improve policy outcomes. This report outlines the projects we have worked on since this time and our results, some of which were outlined in our Spotlight on Health Results report in 2015.²



OUR APPROACH

Our approach combines three elements:

1. **We develop and apply innovative interventions** to improve public policy and services, both breaking new ground and drawing on exciting new developments from other jurisdictions.
2. **We are highly collaborative**, working in partnerships with government agencies, academics, NGOs, and the private sector. We also spend time in the 'field', understanding government services from users and frontline workers.
3. **Our work is strongly evidence-based**. Drawing on what works globally, we use the most rigorous approaches we can (often RCTs) to determine 'what works' before scaling up.

OUR METHODOLOGY

BIU projects work through three iterative phases:

1. Understand the issue and context

We identify exactly what behaviours we want to change and then try to develop a good understanding of the context, drawing on our own fieldwork, analysis of available data, and the relevant literature.

2. Build insights and interventions

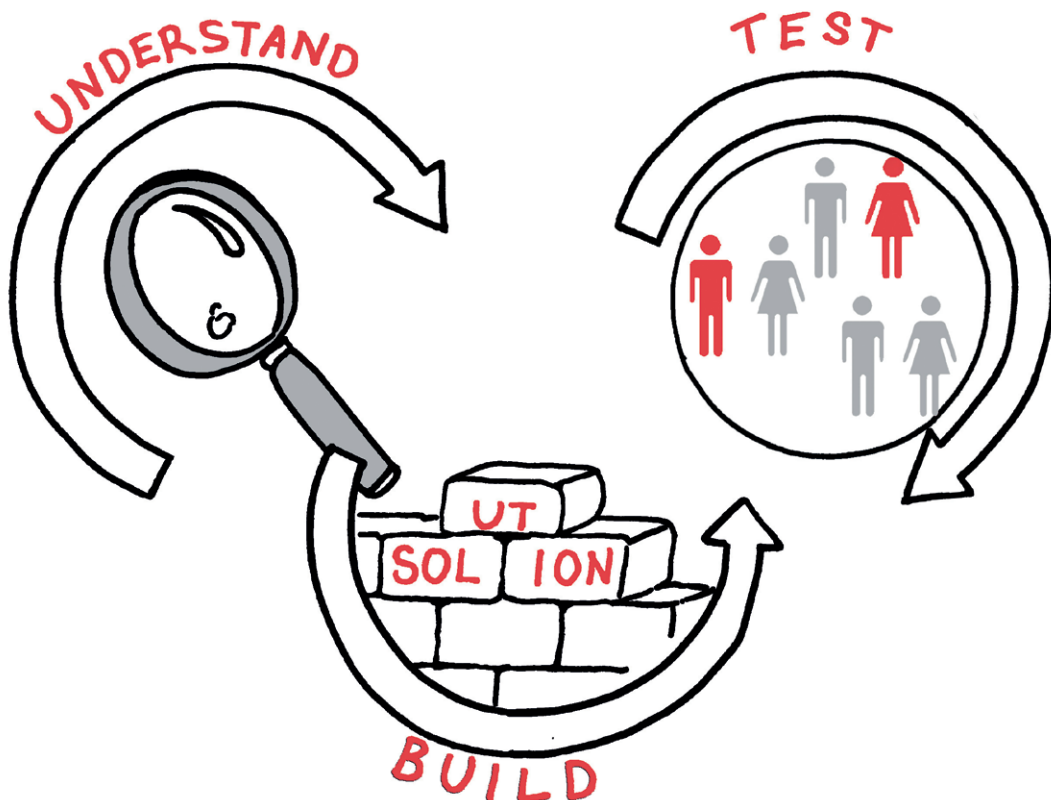
The design of our interventions is an iterative and collaborative process.

We draw on the results of our “Understand” phase and behavioural frameworks to develop insights about the behavioural bottlenecks and enablers. Informed by this, we co-design an intervention with our partners.

3. Test, learn, adapt

We use the most rigorous methodology we can (often RCTs) to determine whether the intervention works.

Based on this we can further refine and improve the intervention, or scale it up more widely.



ADVISORY WORK

As well as designing and running trials, we also provide advice to a wide range of NSW Government agencies on how to apply BI principles to their work. This is typically in areas that are not suited to running trials, such as in the early phases of policy development or where there are significant practical barriers to trialling potential interventions.

Some examples of our recent advisory work include advice to:

- the CBD Coordination Office, Transport for NSW, on opportunities to maximise the behaviour change outcomes from its [Travel Choices program](#), which helps prepare organisations for changes to the transport network in the Sydney CBD and supports a shift to more sustainable ways of moving around the Sydney CBD
- the Office of Environment and Heritage on reducing visitor risk in national parks
- Sydney Trains on applying BI principles to its fare evasion warning letters and fines
- the Office of State Revenue on applying BI to correspondence about unpaid ambulance fees and other enforcement orders
- the Ministry for Health on how to:
 - maximise outcomes from its [Make Healthy Normal](#) “10 week challenge”
 - improve the rollout strategy for patient-reported measures in general practices and outpatient clinics in pilot sites in NSW, and
 - increase take up by clinicians to collect, analyse and act on patient feedback about their health outcomes and health care experiences.

Advice case study: public sector workforce diversity

Increasing the diversity of the NSW public sector workforce is a [key priority](#) for the NSW Government. In 2016, we provided advice to the NSW Public Service Commission on how BI could be used to increase public sector workforce diversity. Drawing on this, we published a [short report](#) that outlines behavioural biases that can affect decision-making in the attraction, selection and promotion of employees and evidence-based interventions to combat these unconscious biases.

Working with FACS BIU

In January 2015, the NSW Department of Family and Community Services (FACS) established their own Behavioural Insights Unit to embed the application of Behavioural Insights within the Department. The focus of the FACS Unit is on major BI projects, including in the areas of child protection and social housing, as well as building the capability of FACS staff to apply BI principles in their work.

DPC and FACS BIU meet regularly and exchange ideas. In 2016, DPC BIU supported FACS BIU to implement their first randomised control trial, which launched in July. Results of the trial are due by the end of 2016 and are expected to inform operational reforms within FACS, demonstrating evidence-based service design within NSW Government.

OUR RESULTS

Since 2014, we have run trials across a range of areas including health, public housing, return to work and taxes and fines. This section of the report outlines what we did and some of the key things we have learned.

Across the trials we report on here, we have tested a range of behavioural interventions. The table below sets out some of the key BI terminology used in the rest of this report.

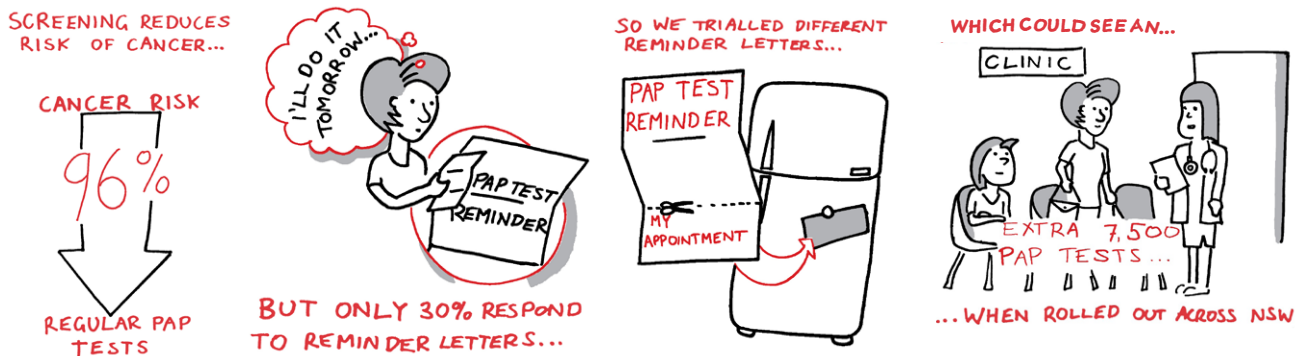
DESCRIPTIONS OF KEY BI TERMS USED IN THIS REPORT	
Avoided loss/ loss aversion	People dislike losses more than they like equivalent gains. Loss aversion refers to our tendency to try to avoid losses.
Cluster RCT	A cluster RCT is a type of RCT in which groups of subjects, rather than individuals, are randomised to receive the control or intervention.
Commitment	People like to be consistent with their previous commitments. Reminding people of their commitments or using commitment devices (ways to encourage people to keep their commitments) can encourage people to do what they have said they will do.
Friction costs	Small, seemingly irrelevant details can make a task more challenging or effortful. Removing friction costs can make it easier for people to complete a task or change their behaviour.
Gain framing	People can react differently to a particular message or choice depending on how it is presented. Gain-framed messages highlight the benefits of a particular behaviour, as opposed to loss-framed messages, which highlight the risks.
Goal setting	When we make a plan to do something, we are more likely to follow through on it in the future than if we just hope to do it. Goal setting can help people make concrete and specific plans, including identifying barriers they might encounter and how they will overcome them.
Incentives	People sometimes act in a certain way just because they want to (intrinsic motivation) but sometimes our behaviours are driven by a desire for external rewards (extrinsic motivation). The way a reward, or incentive, is structured and presented can influence behaviour.
Reciprocity	When someone does something for us, we can feel obligated to return the favour. If a person feels like they have received something, reciprocity can be used to influence their behaviour.
Salience	People are more likely to respond to information that is novel, simple and accessible. Bringing important information to people's attention and presenting it in a salient way can have a strong influence on behaviour.
Social norms	We are strongly influenced by what others do. Social norms are the values, actions and expectations of a particular society or group. Making people aware of what most other people do can encourage them to follow suit.

Increasing cervical screening rates

BACKGROUND AND OBJECTIVES

Regular Pap tests can reduce a woman's risk of being diagnosed with cervical cancer by up to 96 per cent.³ Each year, the Cancer Institute NSW sends out around 368,000 reminder letters to women to remind them that it has been 27 months since their last test, and that they should make an appointment. Before the trial, fewer than 30 per cent of women made an appointment after receiving their letter.ⁱ

We partnered with the Cancer Institute NSW's Cervical Screening Program to test whether variations to the framing of the cervical screening reminder letters could lead to an increase in the number of Pap tests over and above the usual response.



WHAT WE DID

We ran a Randomised Controlled Trial (RCT) with five arms to test four variations of the reminder letter against the standard reminder letter (control). 75,000 letters were sent to women in NSW over a three month period.

We used BI techniques such as gain framing, salience and commitment to design the letters. A case study of a woman who beat cancer through early detection was also included in one of the letters.

Gain framed

Your Pap test is 3 months overdue

Book a Pap test appointment with your doctor or nurse within the next two weeks.

Join the 50,000 women in Northern NSW who had their Pap test in the past two years.

Regular Pap tests can reduce your risk of cervical cancer by 96 per cent. It takes less than 15 minutes and may save your life.

Your last Pap test was performed on <Cytology_Request_Date>, which means you are now three months overdue for your next two-yearly Pap test.

For more information, call us, visit our website or speak to your doctor or nurse.

Anna Burrows
Program Manager
NSW Cervical Screening Program and NSW Pap Test Register

Gain framed + Salient messages

Your Pap test is 3 months overdue

Book a Pap test appointment with your doctor or nurse within the next two weeks.

Join the 50,000 women in Northern NSW who had their Pap test in the past two years.

Regular Pap tests can reduce your risk of cervical cancer by 96 per cent. They take less than 15 minutes and may save your life.

Your last Pap test was performed on <Cytology_Request_Date>, which means you are now three months overdue for your next two-yearly Pap test.

Anna Burrows
Program Manager
NSW Cervical Screening Program and NSW Pap Test Register

ⁱ This figure is based on the trial period where 29.7 per cent of the control group participants attended a screening appointment within 7-97 days of receiving the reminder letter.

Gain framed + Case Study

Your Pap test is 3 months overdue

Book a Pap test appointment with your doctor or nurse within the next two weeks.

Join the 50,000 women in Northern NSW who had their Pap test in the past two years.

"Having my regular Pap test saved my life by picking up the signs of cancer early" – Pamela Hardy

Regular Pap tests can reduce your risk of cervical cancer by 96 per cent. It takes less than 15 minutes and may save your life.

Your last Pap test was performed on <Cytology_Request_Date>, which means you are now three months overdue for your next two-yearly Pap test.

Gain framed + Commitment device

My next Pap test appointment:

Date: _____ **Time:** _____

Doctor/Nurse: _____

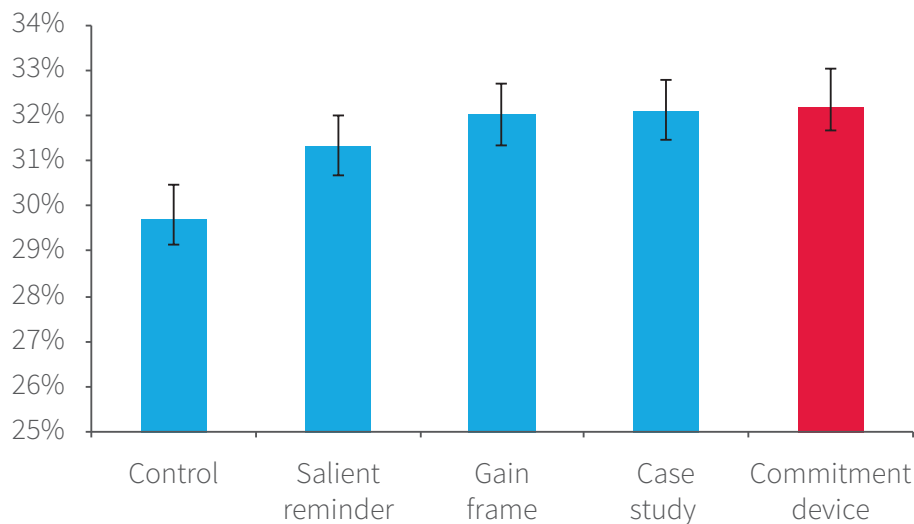
Location: _____

KEY FINDINGS

All BI letters increased cervical cancer screening rates.

We found that all four letters were more effective at encouraging women to have a Pap test than the control letter (29.7 per cent response rate) (all $ps < 0.05$). While there was no significant difference in the effectiveness of the four letters with BI techniques, the letter which included a commitment device had the largest response rate (32.2 per cent).

Our analysis indicates that, over a 12 month period, the commitment device letter could lead to an additional 7,500 women attending their Pap test appointment within three months of receiving their reminder letter.

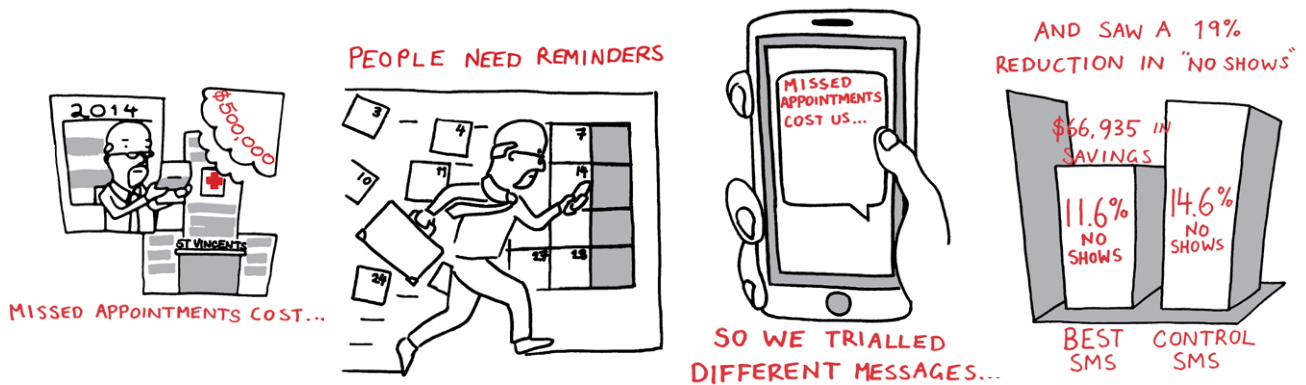


Response rate for 27 month Pap test reminder letter

Key lesson: scaling up

One of BIU's primary criteria for selecting projects is the ability for our partner agency to scale the evidence generated from the trial, which can vary depending on the nature of the intervention. In this case, the Cancer Institute NSW's Cervical Screening Program already had a statewide information dissemination channel set up, which enabled them to rapidly scale up the findings generated from the trial to all reminder letters.

Reducing missed outpatient hospital appointments



BACKGROUND AND OBJECTIVES

Patients not turning up for their Outpatient Clinic appointments has a direct impact on hospitals, both in terms of the cost of rescheduling that patient and the wasted resources of having an empty slot but no patient arriving.

St Vincent's Hospital (SVH) estimates that each missed appointment costs them at least \$125. This cost can add up to a total of \$500,000 a year,ⁱⁱ which could have been used to treat other patients.

To reduce missed appointments, many clinics send text messages to remind patients of their appointments. However, a trial in the UK found that not all messages are effective. The content of the messages matters.⁴ To build on this evidence, we partnered with SVH to test which text messages were most effective at getting patients to attend their appointments.

WHAT WE DID

We ran two RCTs — the first trial ran for six months from January to June 2015 and the second trial ran for six months from August 2015 to January 2016. Over both trials, 18,892 messages were sent to 7,486 patients. This covered 65.8 per cent of all outpatient appointments at SVH.

In the first trial, we tested seven different text messages against the standard message that SVH was sending to their patients (control). In the second trial, we used the two highest performing messages from the first trial ('avoided loss to patients' and 'avoided loss to hospital') and then co-designed two new messages with staff which focused on the non-financial impact that missed appointments have on the clinics and staff.

ⁱⁱ Initial appointments are known to consume more administrative and clinical resources than follow-up appointments. Non-attendance means patients wait longer for specialist treatment and hospital resources are not used efficiently. Under Activity Based Funding, patient level costing allocates costs directly to individual patient episodes. As the cost of no shows cannot be attributed to a patient episode, it has to be spread across those patients that actually attended, making the episode more expensive.

MESSAGE	CONTENT
Control	You have an appointment with Dr [XXXX] in [clinic XXXX] on [date] at [time]. For enquiries, call 8382–3150. Do not reply.
Aggregate loss to hospital	Last year the hospital lost \$500,000 due to lost appointments.
Loss to hospital	If you do not attend the hospital loses \$125.
Loss to patients	If you do not attend the hospital loses \$125 that can be used to treat other patients.
Avoided loss to hospital	If you attend the hospital will not lose the \$125 we lose when a patient does not show up.
Avoided loss to patients	By attending the hospital will not lose the \$125 that we lose when a patient does not turn up. This money will be used to treat other patients.
Free not to attend	You are free not to attend but please call us on 8382–3150 if you need to cancel or rearrange.
Recording	Please attend or call 8382–3150 to cancel/rearrange, or we will record as a missed appt.

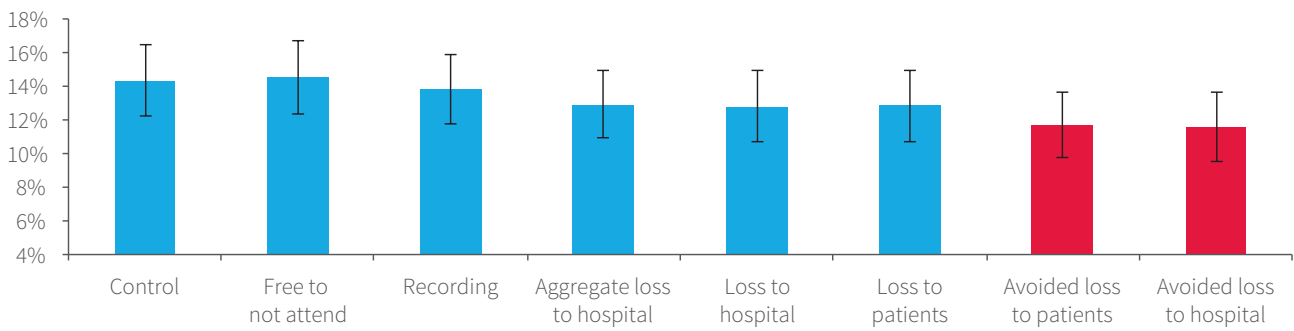
NEW MESSAGES INTRODUCED IN THE SECOND TRIAL	
Loss of hospital's ability to treat	We are expecting you at [clinic XXXXXX] on [day] [date] at [time]. If you do not attend, St Vincent's loses the ability to treat others in need of our services. Please call 8382–3150 if you need to cancel or rearrange.
Clinic is depending on patient	We are expecting you at [clinic XXXXXX] on [day] [date] at [time]. Your clinic is depending on you to attend. Please call 8382–3150 if you need to cancel or rearrange.

KEY FINDINGS

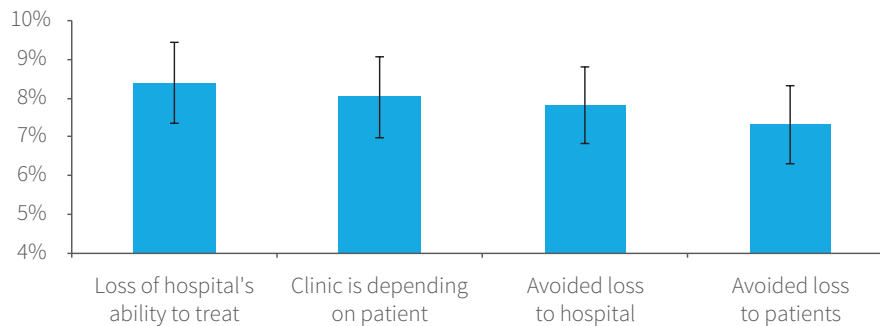
In both trials, *avoided loss* messages led to the lowest Do Not Attend rates.

In the first trial, the '*avoided loss to the hospital*' and an '*avoided loss to the patients at the hospital*' led to a 19.4 per cent and 18.1 per cent reduction in Do Not Attend (DNA) rates from the control message respectively. This amounts to costs savings of \$66,000 per year for SVH.

In the second trial, the highest performing message was the '*avoided loss to patients*' message, with the proportion of missed outpatient appointments down to 7.3 per cent, compared to 8.4 per cent and 8.0 per cent for the two new messages ('loss to hospital's ability to treat' and 'clinic is dependent on patient'). Overall, there was a decrease in the number of missed appointments across both the control and treatment groups between the first and second trial, which was estimated to save SVH more than \$200,000 per annum. However, we are not able to conclude the extent to which the messages that we trialled contributed to this decrease.



Trial 1 — Proportion of missed outpatient appointments



Trial 2 — Proportion of missed outpatient appointments

Key lesson: segmentation

By running an RCT and segmenting the target population, we were able to gain valuable insights into which messages work best and for whom. Our sub-group analysis showed that some individuals cost the hospital a large amount of money in terms of missed appointments. We were also able to identify which cohorts were more likely to fail to attend their appointments (e.g. those who had an appointment in the afternoon and did not have frequent appointments) and which messages worked better for whom. This form of sub-group analysis is useful to the hospital as it allows them to target their messaging strategies for patients in the future.

Addressing childhood obesity

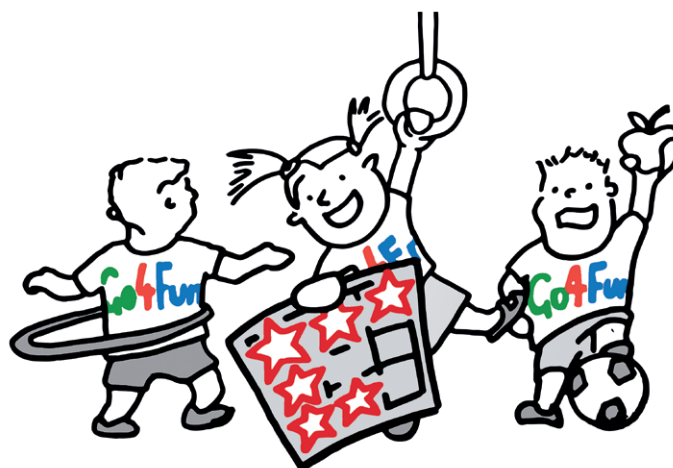
BACKGROUND AND OBJECTIVES

Childhood obesity is a significant problem in NSW, with 22 per cent of children between 5 and 16 years being obese or overweight in 2015.⁵ The significance of the problem has been recognised by the NSW Government and reducing childhood obesity rates by 5 per cent over the next decade is one of the [Premier's Priorities](#).

Community-based weight management programs are an important response to address childhood obesity. However, the scientific literature suggests that their effectiveness could

be enhanced by providing a structured incentive and goal setting schemes.^{6,7} The Go4Fun® program is the NSW Government's only targeted community-based childhood obesity program. Managed by the NSW Office of Preventive Health, it is an evidence-based 10 week program that targets weight-related behaviours and self-esteem of overweight and obese children aged 7 to 13 years and their families.⁸

We partnered with the George Institute for Global Health, the NSW Office of Preventive Health, the Better Health Company which provides the centralised program infrastructure and five local health districts to test the impact of enhanced and systematic goal setting, rewards and text reminders on the effectiveness of the Go4Fun program.



WHAT WE DID

We ran a cluster RCT across 25 Go4Fun program sites in NSW.ⁱⁱⁱ The trial ran across two school terms and included 525 overweight or obese children aged 7-13 years. The parents/guardians of all children enrolled in the program consented to their children taking part in the trial.

We collected a range of data on each participant at the start of the trial, at the end of the 10 week program, and six months after the program, including:

- Body Mass Index (BMI) z-score^{iv}
- Waist circumference
- Recovery heart rate
- Self-reported self-esteem
- Attendance measures (total attendance and completion of the Go4Fun program)
- Self-reported physical activity and nutrition measures (hours of physical activity per week, likelihood of meeting physical activity guidelines, hours of sedentary activity per week, fruit and vegetable serves per day, sugar-sweetened drinks per day and total nutrition scores).

Children in the control group received the standard Go4Fun program. However, given that some control programs were already using attendance incentives, we standardised across all sites, so that both intervention and control programs used the same incentives for attendance.

ⁱⁱⁱ The trial was initially going to be at 40 program sites, but 15 programs were removed from the trial as they recruited too few children to proceed.

^{iv} The BMI z-score is a measure of weight, adjusted for height, sex and age, relative to a smoothed reference distribution.

In addition to the standard Go4Fun program with standardised incentives, children in the intervention programs participated in an enhanced goal setting component and received incentives for reaching certain levels of goal attainment. In particular, at the third session of the program, children and their parents/guardians in the intervention group were taught to set an exercise and a nutritional goal. Children would receive milestone-based incentives for achieving their set goals throughout the program.

In session nine, children and parents/guardians in the intervention group were encouraged to set goals to be achieved after the program finished. Parents/guardians whose children attended session nine would receive weekly mobile phone text message reminders to support and encourage their children to achieve their goals (and set new ones where relevant), drawing on theories of habit formation. Parents/guardians were encouraged to text back whether or not the child had completed their goals. Each goal achieved was rewarded with a ticket entry into a prize draw, for a family pass to the local zoo or equivalent. The prize draws were drawn six months after the program finished.

NEXT STEP: REPORTING IN 2017

We are in the process of collecting data and are aiming to publish a report on the findings in early 2017. The Better Health Company and the Office of Preventive Health are waiting for these results before implementing any state wide program enhancements.

Reducing social housing rental arrears

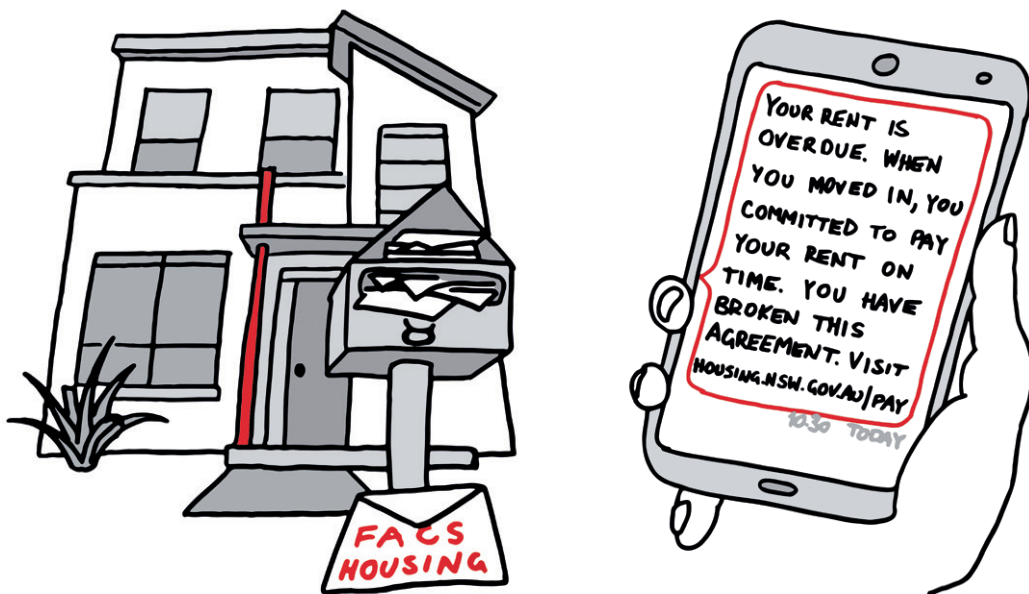
BACKGROUND AND OBJECTIVES

The Department of Family and Community Services (FACS) requires tenants living in a property owned or managed by them to pay tenancy charges to cover rent and other expenses such as water usage. When tenancy charges are not paid in full, the tenant's account goes into arrears, resulting in a breach of their tenancy agreement. In some cases, unpaid arrears can lead to termination of tenancies.

Currently, FACS contact tenants in writing if their accounts go into arrears. FACS may also contact tenants by phone, or by visiting them in their homes. Managing rental arrears is a resource-intensive activity for FACS.

BIU partnered with the FACS Customer Service and Business Improvement Unit to test whether sending text messages to tenants would encourage them to pay their rental arrears or set up a payment plan, which we call "exiting arrears", faster than those who just received a letter.

Systematic reviews of telephone and text message reminders have found that they significantly improve attendance to health care providers, with text reminders being as effective as phone call reminders and postal reminders.^{9,10} More broadly, the evidence indicates that text messages can change behaviour when aimed at short-term outcomes (for example, our hospital outpatient appointment trial above).¹¹



WHAT WE DID

We ran an RCT with five arms testing four different text messages against sending no message (the control). A total of 9,739 text messages were sent over six months between September 2015 and February 2016. Each time an eligible tenant's account^v went into arrears by more than \$5 and they were sent a letter by FACS reminding them to pay their account, they entered the trial sample and we randomly allocated them into one of the five conditions.

^v Eligible tenants included those for whom FACS had a mobile number on record and whose account had gone into arrears by more than \$5.

We worked with FACS staff to design the text messages using lessons from BI literature.

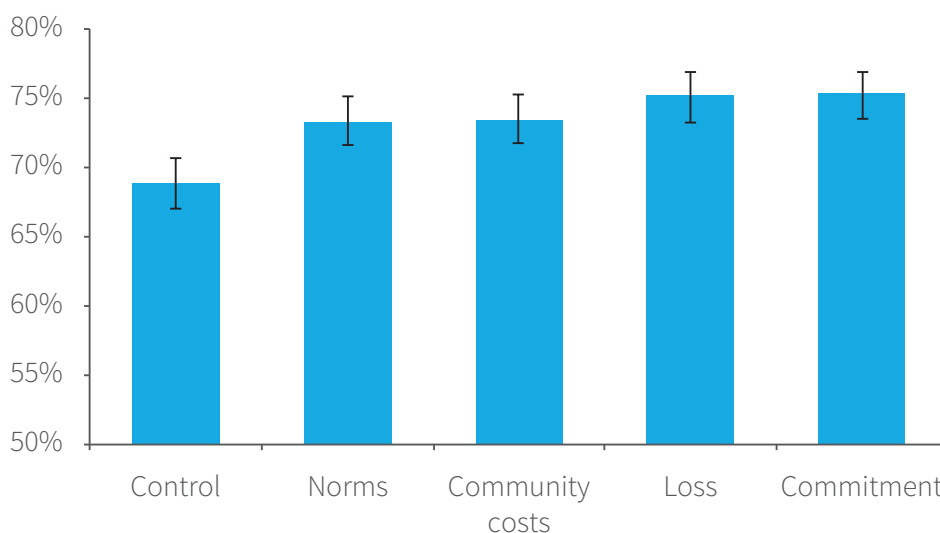
MESSAGE	TEXT MESSAGE SCRIPT
Control	No text message
Social Norms	Your rent is overdue. More than 9 out of 10 tenants in your area have paid their rent on time. Paying now keeps you in your home. Visit housing.nsw.gov.au/pay
Loss aversion	Your rent is overdue. Your tenancy may be at risk if you do not pay now. Call your local office or visit housing.nsw.gov.au/pay
Cost to community	Your rent is overdue. Unpaid rent costs the government and community money which could be used to help others like you find a home. Visit housing.nsw.gov.au/pay
Commitment	Your rent is overdue. When you moved in, you committed to pay your rent on time. You have broken this agreement. Visit housing.nsw.gov.au/pay

KEY FINDINGS

Text messages are effective in increasing the likelihood that a tenant will make a payment or enter into a payment plan

Sending a text message to tenants significantly increased the likelihood that they will exit arrears within a week compared to people in the control group who were not sent a message. The people who were sent the ‘Commitment’ message were the most responsive to the message – they showed a 6.5 percentage point increase in the rate of exiting arrears one week after being sent the text messages ($p < 0.001$), from 68.8 per cent to 75.3 per cent, a 9.4 per cent relative increase. However, there were no significant differences in the tenants’ likelihood of exiting arrears between each message.

We also found that some groups of tenants were more responsive to the text messages than others. For example, tenants aged between 55 and 64 years and households that included people with a disability were significantly more responsive to any of the text messages.



Proportion of tenants that exited arrears

Continuing to send text messages to tenants has the biggest effect on payment behaviour

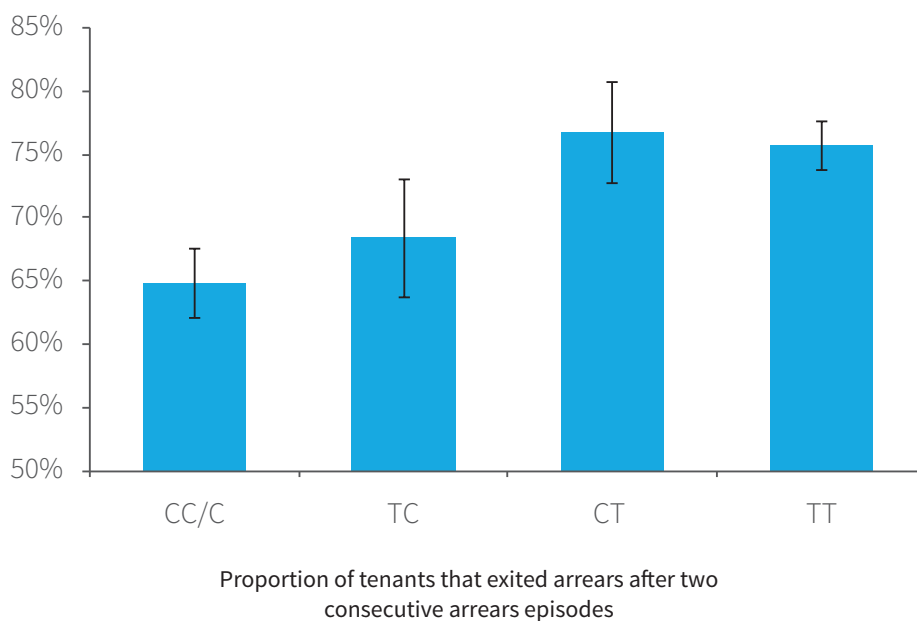
During the trial, 2,540 tenants went into arrears on two or more occasions. As tenants were re-randomised each time their account went into arrears, some tenants who had received a text message the first time were then randomly allocated to the control group and did not receive a text message the next time. This allowed us to test whether people came to rely on the text message to pay their arrears, or whether the first message set up a good habit for future occasions. We can split the tenants on the basis of whether they received: no text message twice in a row (CC), a text message followed by no message (TC), no text message, followed by a text message (CT) and two text messages (TT).

Given there were not enough tenants in the CC group to find significant differences between this group and the other groups, we also included tenants who only entered the trial once and were in the control group in the analyses and combined them with the CC group (CC/C).

If tenants come to rely on the text message we would expect the TC group to be **less** likely to exit arrears than the CC/C group (a backfire effect). If the first text message established good habits, then we would expect the TC group to be **more** likely to exit arrears than the CC/C group, and as likely to exit as the TT group.

In comparison with the CC/C group, we found that the TC group was no more or less likely to exit arrears ($p = 0.172$). We found that the likelihood of exiting arrears increased by 42.8 per cent if the tenant received any two treatment messages (TT) over receiving one text message and none the second time around (TC) ($p = 0.004$).

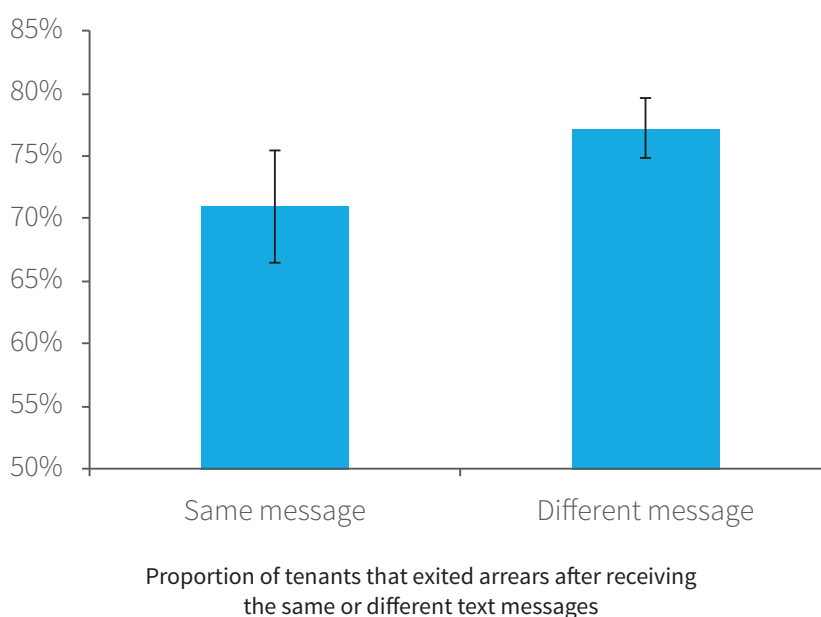
Given the high performance of the TT group over the TC group, this trial shows there is value in continuing to send text messages. We also saw no evidence of a backfire effect.



Sending different messages to the same tenant is more effective than sending the same message again

We also investigated the possibility that receiving two different text messages (e.g. 'Social Norms' message and then 'Commitment' message) was more effective than receiving the same message twice in getting tenants to exit their second arrears episode (e.g. 'Commitment' message then 'Commitment' message). We found that the likelihood of exiting arrears increased by 38.3 per cent when tenants received two different text messages compared to receiving the same message twice ($p = 0.011$). This could be because the novelty of the message increases its salience.

This is an important finding for policy makers to consider (and trial!): whether varying the content of routine communications with customers over time has an impact on behaviour.



Text messages help tenants stay out of arrears for longer

Our analysis found that tenants who were sent a text message took longer to go back into arrears than those who were not. On average, tenants who were sent a message stayed out of arrears for eight to nine weeks (median) compared to six or seven weeks (median) for those who were not sent a message. This means tenants who received messages had fewer arrears episodes during the trial period. This reduces the administrative costs for FACS in managing these tenancies.

NEXT STEP: GREATER USE OF TEXT MESSAGES

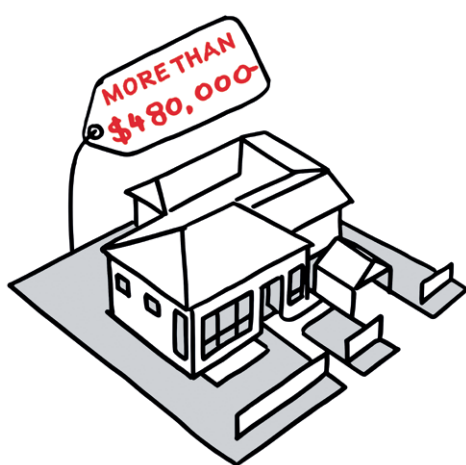
Bolstered by the success of this trial, FACS is now working on integrating the use of text messages into the range of ways it communicates with tenants.

Increasing timely payment of land tax

BACKGROUND AND OBJECTIVES

NSW Office of State Revenue (OSR) collects land tax on investment properties for which the total land value exceeds \$482,000. This value threshold is revised each year, and in 2015/16, amounted to around \$2.7 billion worth of land tax owed to OSR. OSR notifies landowners how much land tax they owe through a letter in mid-January each year and payment is required within seven weeks.

In 2015, 11 per cent of the people who owed land tax did not pay on time and were also late with their land tax payment in 2014. In January 2016, we partnered with OSR to test whether BI techniques could be used to increase the number of these landowners who paid all or some of their land tax on time (i.e. by the due date, or within seven days of it).



WHAT WE DID

BIU and OSR designed text messages, letter and email reminders that were sent two weeks before the land tax payments were due. The communications drew on BI principles such as salience, social norms, reciprocity and reducing friction costs, to encourage timely payment. For example, by including a direct web link to the online payment portal in the reminders, it became easier for landowners to make an immediate payment.

We ran an RCT with three arms to test whether the reminders would encourage landowners in the treatment groups to pay on time, compared to the control group who were not sent a land tax reminder. One group was sent the letter reminder and another was sent the letter reminder as well as an email and text message. The third group received no reminder at all.

KEY FINDINGS

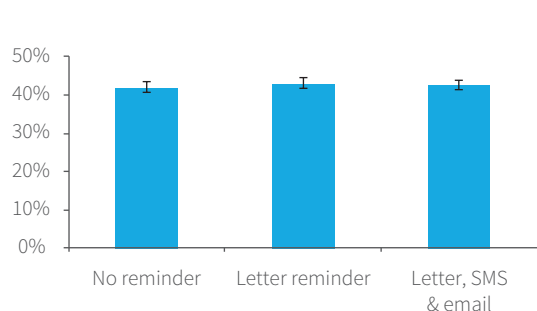
How up-to-date customer contact details can have an impact on how successful an intervention is

We found that OSR could only reach a small number of landowners by email or text message. For example, for the group of landowners who received the letter, email and text message reminder, only 16 per cent of them had email addresses on record and of these, 38 per cent were not valid. For text messages, only 25 per cent of landowners had registered their mobile numbers with OSR, making it difficult to reach them through this channel.

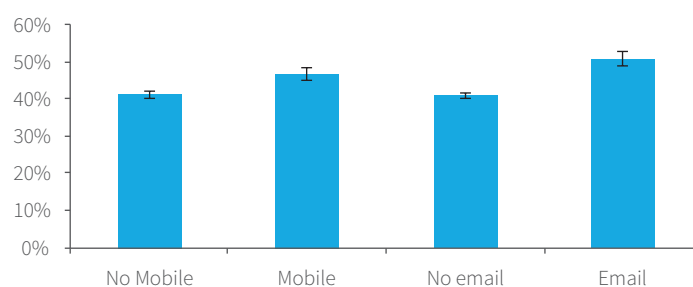
There is no evidence that reminder messages improved timely payment

We also found that sending reminders via letter, email and text messages did not significantly increase the number of people who paid their land tax on time in comparison to the control group, who did not receive a reminder.

We found that landowners with more contact information on record (e.g. a phone number or email address in addition to a postal address) were significantly more likely to pay some or all of their land tax by the due date, *regardless of whether they received a reminder letter*.



Proportion of landowners who paid some or all of their land tax on time, by trial arms



Proportion of landowners who paid some or all of their land tax on time, by contact information

Key lesson: the cohort

While we did not observe a positive effect as a result of our interventions, this trial is a good example of the value of running RCTs and experimentation more broadly. Running a trial has allowed us and OSR to evaluate how up-to-date the OSR customer contact database is and how some interventions are not effective on every cohort: something that can be only understood by running a trial.

This is an area where it would be useful to understand more about the particular drivers and barriers for payment for this cohort of taxpayers before trialling other messages. Furthermore, given that this trial tested the new reminders with a small subset of all landowners (those that paid late in both 2014 and 2015), future trials may be more effective on a wider cohort beyond this group.

Helping medically discharged police officers return to work

BACKGROUND AND OBJECTIVES

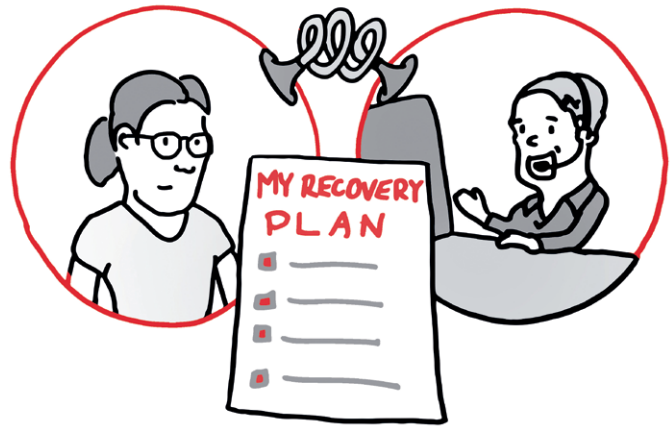
Due to the inherently dangerous nature of the work the NSW Police Force undertakes, injuries sustained in the line of duty are common. These injuries can lead officers to being discharged from their occupation. Once discharged, police officers cannot go back to work in the Police Force. If they wish to rejoin the labour market, they need support in developing new skills. At this point, effective case management can play an important role in helping them back into the workforce.

In 2013, we worked with Allianz to test how BI can be used to help injured teachers return to work.¹² Since 2014, we have been working with Employers Mutual Ltd (EML) on an RCT to trial whether similar interventions can be used to help medically discharged police officers in NSW.

WHAT WE DID

Our fieldwork found that:

- case managers' engagement with their work could be improved by improving information sharing and IT solutions
- written communications could be used more effectively to build relationships
- many interactions between case managers and workers were still being conducted by email and letter – a more personal phone call would greatly improve the relationship between case managers and workers
- workers were often passively involved in their journey back into work with planning predominantly focused on treatment providers, doctors and medico-legal providers. There was a clear opportunity here to empower workers to take the lead in their treatment and return to work for better outcomes.



Based on the field work findings, we introduced a bundle of interventions including:

- encouraging case managers to reflect on their performance regularly by introducing 10 minute slots every day for them to reflect on what went well that day and to write this down in a reflection diary
- teaching case workers about “growth mindsets”,¹³ based on international evidence regarding the importance of mindsets in responding to adversity
- simplifying and personalising written communications
- training case managers to make the most of courtesy calls to workers.

The final and most fundamental change to the process was the use of goal setting and implementation planning through the “My Recovery Plan”. This plan provided case managers and workers with a tool to support the development and implementation of behavioural plans which integrate work and health goals. We designed this approach to connect an individual's personal values and goals to specific behavioural plans.

PROGRESS

The trial started in March 2015 and the interventions are now being delivered to all of the medically discharged police officers. As of the time of publication, we have not seen any significant differences between the intervention and control groups with respect to the amount of payments that they received. This result was not unexpected as the journey back into work for most workers is likely to be long, given the severity of their conditions. We had hoped to be able to demonstrate an improvement in workers' health as a result of the intervention using medical certificates and capacity records as a proxy, but this has not proven possible because there is no requirement for exempt workers to submit medical certificates. The emerging model in the sector is to progressively: (1) support mental and physical wellbeing and establish social connections, (2) develop capacity to work (e.g. re-training) and (3) encourage workers to actively seek work.

NEXT STEP: QUALITATIVE INVESTIGATION

Given the substantial positive impact on staff morale in the treatment group and ad hoc feedback from workers received to date, EML have commenced progressively rolling out the interventions across the business.

A qualitative investigation by the George Institute has been commissioned. This will reveal how the interventions were implemented and viewed by EML have commenced progressively rolling out the intervention across the business.

Reducing domestic violence re-offending

BACKGROUND AND OBJECTIVES

Domestic violence (DV) has serious, long-term impacts on the lives of men, women and children in NSW. One in six Australian women and one in twenty Australian men have, since the age of 15, experienced sexual or physical violence from a partner they have lived with.¹⁴ The NSW Government is committed to addressing this problem and identified a reduction in the proportion of domestic violence perpetrators re-offending as a [Premier's Priority](#).

We have been partnering with the Department of Justice on a number of initiatives to address DV, the first of which is to make changes to Apprehended Domestic Violence Orders (ADVOs) in order to improve defendants' compliance and engagement with the court process.



WHAT WE DID

Over six months, we undertook fieldwork to understand the issues facing defendants in complying with ADVOs and to gauge the level of understanding of the current orders and process. This fieldwork involved meeting with a wide range of people and organisations in the system, from police and court staff to victims and victims' groups, as well as undertaking court observations in Sydney, Western NSW and the Hunter region.

Our fieldwork revealed that the current ADVO is not well understood by many defendants and victims. A Flesch Kincaid Reading Ease test on the current ADVO showed that it would need someone with 13.5 years of education to understand the form. As a result, many agencies and services believe that defendants and victims often do not understand the full implications of their ADVOs.

To address these issues and to strengthen the effectiveness of ADVOs, we worked with a wide range of stakeholders to simplify the order and to introduce behavioural features. Key changes to the ADVO include:

Simplified language and plain English examples — terms that can cause confusion (such as 'molest' and 'reside') and complicated orders related to family law have been simplified. Explanatory text and examples have been added to help defendants better understand their obligations under the ADVO. A Flesch Kincaid Reading Ease test on the new ADVO indicated that the required comprehension level has been significantly improved to eight years of education.

Prioritising and personalising key messages — the consequences of breaching the orders (listed at the end of the ADVO) are now brought to the attention of the reader at the very start of the ADVO. The use of the third person and indirect language has also been removed so that the order is now personalised, in order to encourage greater accountability among defendants.

Behaviour change messages — the ADVO now includes behavioural messages on the last page, such as highlighting the impact of violence on children and challenging the normalisation of domestic violence, as well as signposting to behaviour change services.

PROGRESS

The Plain English ADVO was rolled-out across NSW in December 2016. It was translated into community languages, and accessible versions of the document were also created. As part of our wider program of DV work with Department of Justice, we are also running a RCT using text messages to try and increase court attendance and compliance with ADVOs and developing other interventions aimed at reducing breaches.

WHAT IS NEXT FOR BIU?

We have achieved a lot over the last two years, including continuing to build the evidence base for how effective BI can be in improving outcomes across a range of policy areas and public services. We are now pretty adept at understanding how simple behavioural techniques such as changing a letter or sending a text message can nudge somebody to pay a fine or attend an appointment, though as the land tax trial shows, there is always more to learn! The benefits of our interventions are also being scaled up as partners recognise the positive impact they can have.

Over the next few years, we will be using our approach to tackle some of the more challenging public policy issues in both the social and economic policy spheres. We are currently working on a range of new trials across a number of portfolios across the NSW government. This will require us to test more complex interventions and in some cases, more than one intervention at a time to see if we can make and measure a difference.

PARTNERS	PROJECT AIM
CBD Coordination Office	To understand and test the different ways we could contribute to reducing CBD congestion by encouraging CBD commuters to shift their travel to outside of the morning and afternoon peak periods.
Department of Justice	To reduce ADVO breaches and reoffending and give domestic violence perpetrators opportunities to change their behaviour.
Public Service Commission	To increase diversity in the NSW public sector by investigating ways to combat unconscious bias in the attraction, selection, promotion and retention of employees.
Department of Planning and Environment	To increase participation in community consultation activities.
Training Services NSW	To increase apprenticeship completion rates in NSW.
Ministry of Health	To improve the patient's journey from hospital to home, resulting in better care and more capacity being returned to the system.

As we continue to break new ground, we are now working more closely with local and international experts in the field to ensure we are drawing on the most cutting-edge behavioural research. We are also looking forward to working with and learning from other BI teams that have recently been set up across Australia, including the Australian government's BETA team and at the Victorian Department of Premier and Cabinet.

We will also be looking at how to better engage with our Community of Practice both through our website and through face-to-face events to ensure we continue to raise awareness about how BI can be applied to public policy and service delivery in NSW.

References

1. NSW Department of Premier and Cabinet — Behavioural Insights Unit (2014). *Understanding People, Better Outcomes*. Available from <http://bi.dpc.nsw.gov.au/library/>
2. NSW Department of Premier and Cabinet — Behavioural Insights Unit (2015). *Spotlight on Health Results*. Available from <http://bi.dpc.nsw.gov.au/library/>
3. Cancer Institute NSW (2016). *Cervical Screening NSW*. Retrieved from: <https://www.csp.nsw.gov.au/>
4. Behavioural Insights Team (2015). *Reducing missed appointments*. Retrieved from: <http://www.behaviouralinsights.co.uk/trial-results/reducing-missed-appointments/>
5. Health Stats NSW (2015). *Overweight and obesity in children*. Retrieved from: http://www.healthstats.nsw.gov.au/Indicator/beh_bmikid_cat
6. Cawley, J., & Price, J. A. (2009). *Outcomes in a program that offers financial rewards for weight loss* (No. w14987). National Bureau of Economic Research.
7. Volpp, K. G., John, L. K., Troxel, A. B., Norton, L., Fassbender, J., & Loewenstein, G. (2008). Financial incentive-based approaches for weight loss: a randomized trial. *Jama*, 300(22), 2631–2637.
8. NSW Office of Preventive Health (2013). *The first year (2012–13) in review*. Retrieved from: <http://www.preventivehealth.net.au>
9. Car, N. J., Christen, E. W., Hornbuckle, J. W., & Moore, G. A. (2012). Using a mobile phone Short Messaging Service (SMS) for irrigation scheduling in Australia—Farmers’ participation and utility evaluation. *Computers and Electronics in Agriculture*, 84, 132–143.
10. Hasvold, P. E., & Wootton, R. (2011). Use of telephone and SMS reminders to improve attendance at hospital appointments: a systematic review. *Journal of telemedicine and telecare*, 17(7), 358–364.
11. Fjeldsoe, B. S., Marshall, A. L., & Miller, Y. D. (2009). Behavior change interventions delivered by mobile telephone short-message service. *American Journal of Preventive Medicine*, 36(2), 165–173.
12. Behavioural Insights Unit. (2016), *Applying behavioural insights to return to work*. Available from: <http://bi.dpc.nsw.gov.au/library/>
13. Yeager, D. S., & Dweck, C. S. (2012). Mindsets that promote resilience: When students believe that personal characteristics can be developed. *Educational Psychologist*, 47, 302–314.
14. NSW Ministry of Health (2016). NSW domestic and family violence blueprint for reform 2016–2021: Safer lives for women, men and children. Retrieved from: http://domesticviolence.nsw.gov.au/_data/assets/pdf_file/0004/379849/dfv-blueprint-for-reform.pdf

ISBN 978-0-7313-5421-4

Disclaimer

While every reasonable effort has been made to ensure that the facts contained within this document are correct at time of printing, the state of NSW, its agents and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance or upon the whole or any part of this document.

Copyright Notice



© State of New South Wales (Department of Premier and Cabinet) 2016. For current information go to www.dpc.nsw.gov.au/copyright_and_disclaimer. This work (apart from any State arms, symbols or trademarks or third party material) is licensed under the Creative Commons Attribution 4.0 licence. See <http://creativecommons.org/licenses/by/4.0/> for details.

Visit: bi.dpc.nsw.gov.au

Email: behaviouralinsights@dpc.nsw.gov.au