IGEES

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An Roinn Caiteachais Phoiblí
agus Athchóirithe
Department of Public
Expenditure and Reform

Behavioural Economics

Increasing Attendance at Group Information Sessions

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Eric Doyle & Karl Purcell
IGEES
Department of Public Expenditure and Reform
& Department of Social Protection

Summary

Working together, the Department of Public Expenditure and Reform, the Department of Social Protection and a number of its Intreo Office's across Ireland, have conducted a Randomised Control Trial (RCT) investigating whether making behaviourally informed changes to invitation letters reduces the number of Did Not Attends (DNAs) at Group Information Sessions (GIS).

The study tested the standard DSP invitation letter to jobseekers against two letters designed using insights from behavioural economics. The study also provided an opportunity to test the feasibility of applying experimental type methods, such as RCTs, in an operational public service setting.

The results of the RCT showed that the letters based on behavioural economic designs on balance outperformed the standard letter regarding attendance behaviour. In particular, the study made the following findings:

- **On the balance of evidence, letter 3 was shown to be the most effective in reducing DNA's and maximising attendance.**
- **Letter 2 is the most effective in encouraging jobseekers to reschedule when they cannot attend their appointment.**
- **The original letter, letter 1, performed poorest, with the highest rates of DNA's and the lowest rates of attendance and rescheduling.**
- **GI Session invite letter 3 is the most effective when sent less than one week before the actual date of the client's scheduled GI session. Letters should be sent no more than 6 days in advance of a GI session to maximise attendance.**
- **Preliminary cost-benefit analysis shows that the introduction of letter 3 could produce time savings of over ~660 person hours per year, if rolled out nationwide.**
- **Based on the findings, it is recommended that the original invite letter is replaced with letter 3 as designed in Appendix F.**

1. Introduction

"Did Not Attends" (DNA's) occur when a jobseeker unexpectedly fails to attend a scheduled Group Information Session (GIS). Group Information Sessions invite jobseekers to attend their local Intreo office and learn about the range of supports available to them. While jobseekers' attendance at GI sessions is technically mandatory, a large number of jobseekers still do not attend. For example in the North Dublin division, during the period August 2015 to January 2016, DNA rates were recorded as high as 52%.

There is extensive evidence that altering the content of letters using principles from Behavioural Economics or 'behavioural insights' can improve their impact. For example, a trial by the Behavioural Insights Team in the UK reduced DNA's at hospital appointments by 2.6 percentage points, by highlighting the specific costs of a missed appointment to patients, which if introduced could result in 5,800 fewer missed appointments across all outpatient specialities[1]. In Ireland for example, in recent years the Revenue Commissioners have conducted number of trials that applied behavioural insights into the design of their communications with their clients[2] . These studies have shown that use of personalisation, social norms and simplified design features can improve responses and encourage compliance behaviour.

The Department of Social Protection (DSP) in collaboration with the Department of Public Expenditure and Reform (DPER) undertook a trial study to test the application of behavioural insights on DNA rates. Specifically, the study analysed the scope for improving attendance rate at GIS by altering the design of the appointment letters issued by DSP to jobseekers using design elements based on behavioural economic insights. The study tested two variations of the letter, each based on a different mix of behavioural economics design elements, against the standard GIS appointment letter issued to jobseekers.

The study design represents a first for the DSP insofar as it took the form of a structured randomised control trial (RCT). The RCT ran for 20 weeks between May and September 2016 and involved 10 Intreo centres from the North Dublin and the West divisions.

2. Context

As part of jobseekers obligations regarding receiving jobseekers allowance payments while unemployed, they are required to engage with the public employment service. This is known as the Intreo activation and case management service which is designed to support unemployed people into employment through providing a range of activation, training and education programmes as well as ongoing individual guidance

[1] Hallsworth M., Berry D., Sanders M., Sallis A., King D., Vlaev I., et al. (2015)
[2] Revenue Commissioners (2017)'Applying Behavioural Science in Tax Administration – A Summary of Lessons Learned', Statistics & Economic Research Branch.

and advice. The 'Intreo process' has three stages which are intended to provide a streamlined step by step pathway from unemployment back into employment (see Figure 2.1 below).

The first stage called integrated reception occurs within one week of a fresh claim registration. During this stage, the new entrant jobseekers is provided with relevant information regarding his/her claim and an appointment is made with a deciding officer to process and decide the claim and profile the jobseeker for activation. The jobseeker must also complete the PEX questionnaire which profiles him/her in terms of their closeness to the labour market, which in turn determines the level of subsequent support he/she needs. The appointment occurs usually within one week of registration.

When the jobseeker attends the appointment he/she enters the second stage of the process known as integrated decision. As well as notifying the jobseeker of the claim decision, at this meeting, he/she is also made aware of the requirement to attend a GIS and that they will be notified by post when they have been scheduled to attend. Within 2-3 weeks of the start of the claim, the jobseeker is obliged to attend a GIS regarding the activation process. During this stage the jobseekers PEX score is calculated.

At the end of the week of the appointment, each Intreo centre runs a client "finder" selection strategy which identifies clients eligible for a GIS. Those in the GIS "finder" are listed from top to bottom by reference to their duration in the finder. Depending on the numbers being selected by the strategy as determined by the Activation Support Team (AST) and capacity to run GI Sessions, some people may remain in a finder for some time. Most importantly, if a person, scheduled for a GIS, cancels, he is returned to the GIS "Finder", from where he may be scheduled again for GIS.

When the Intreo offices finalise the finder list, each office issues an invitation letter to the new jobseekers to attend the next scheduled GIS, capacity allowing. The GIS is a group information session of up to 30 jobseekers hosted by a member of the Intreo centre AST.

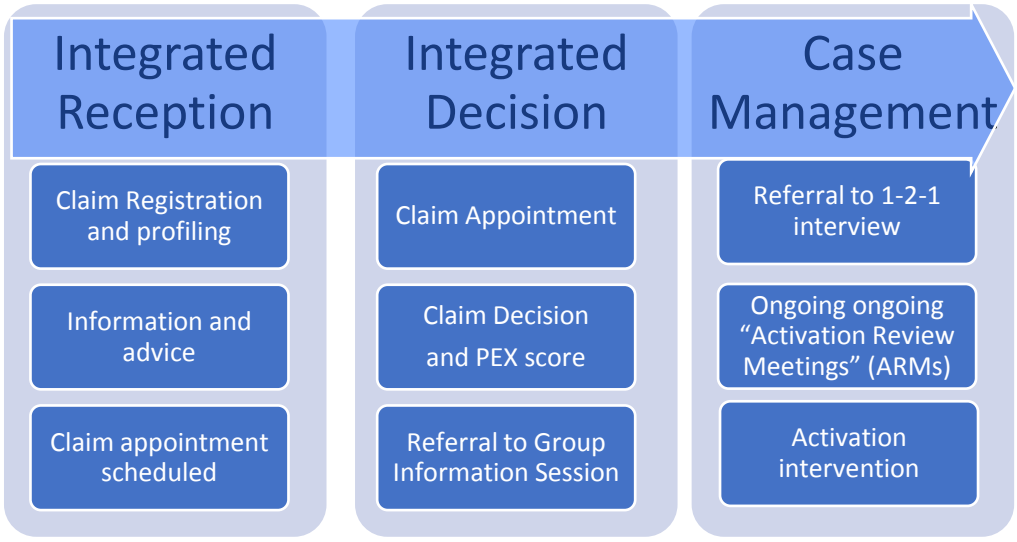
When a jobseeker is invited to a GIS there are several possible responses, including "attended", "did-not-attend", "re-scheduled", or "cancelled". It is important at this point to define exactly what each of these responses mean:

- Attended: The client attended the GI session which they were scheduled for and their attendance was recorded by a member of the AST.
- Did-Not-Attend (DNA): The client failed to attend the GI session which they were scheduled for, and did not contact the Intreo Office, via any means, before the session to notify the office of their intent to not attend.
- Re-Scheduled: The client contacted the Intreo Office, via any means, and notified the AST of their need to re-schedule their appointment to a later date.

- Cancelled: The client's appointment was cancelled by themselves, or a member of the AST, for a specifc reason. The scope for cancellations is prescribed at office level. This means the reasons for a cancellation can vary across offices; they can include exceptional medical or personal reasons. However, in most cases, a cancellation means the client has signed off or is in the process of signing off their claim.

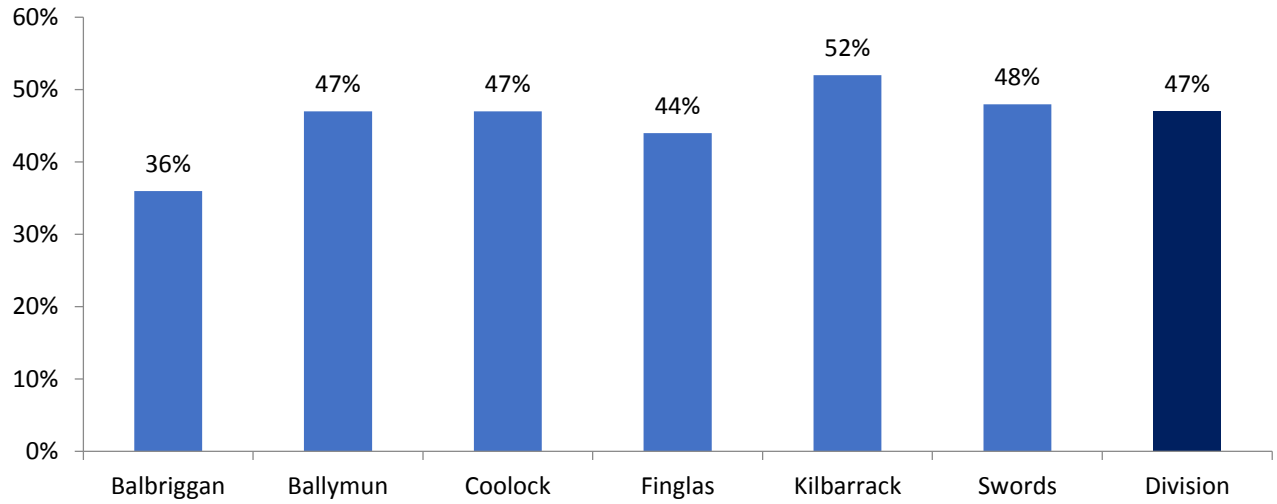
There is an important rationale for the disaggregation of failure to attend into three. Where the jobseeker notifies the Intreo centre in advance of his/her failure to attend, the Intreo office can re-arrange the appointment and minimise the inefficient use of their resources. From a behavioural point of view, a re-scheduling may demonstrate ongoing engagement with Intreo, whereas cancellations may be more ambiguous. A single cancellation may be due to unforeseen developments such as a medical appointment, however multiple cancellations may indicate that the jobseeker is disengaged from the public employment services and is not meeting their obligations in respect of welfare support. These behaviours have important implications for the longer term prospects of re-employment.

Intreo Process:



A key challenge regarding the effectiveness of the Intreo process is ensuring that jobseekers remain engaged with the services. This is evident in the difficulty Intreo centres have with attendance. For example, in the Dublin North Intreo division, between August 2015 and January 2016, the rate of non-attendance, including DNA's, rescheduling and cancellations, by office varied from 36% to as high as 52% and the overall average was 47% (see Figure 2.1 below).

Figure 2.1: North Dublin Division Non-Attendance Rate by Office, Aug 2015 to Jan 2016



Source: DSP, Activation Case Management Database

The DSP utilises a range of carrot and sticks to achieve this. The carrot is access to financial supports, a wide range of activation and training programmes and ongoing advice and guidance. The stick includes penalty rates and payment suspensions. However, another important dimension to facilitating engagement is the quality of communication of key information. A growing literature from behavioural economics, from Ireland and abroad, has demonstrated that effective communication is as much about how one communicates as much as it is about what one is communicating.

For example, the Behavioural Insights Team (BIT) in the UK demonstrated in several trials, that by altering the content of letters using principles from Behavioural Economics or 'behavioural insights' it is possible to improve their impact[3]. In one trial, they found that using social normative messaging improved tax compliance. In another trial, BIT showed that by highlighting the specific costs of a missed appointment to patients, hospitals were able to reduce DNAs at hospital appointments by 2.6 percentage points[4]. In Ireland, the Office of the Revenue Commissioners showed how through personalising correspondence to SME taxpayers with handwritten Post-it® notes, they were able to improve the completion and return of surveys[5].

Drawing on these findings this study applies a selection of behavioural insights in the design of alternative notification letters to jobseekers to address the challenge of DNA rates at GIS. The next section details how

[3] http://link.springer.com/article/10.1007/s11166-009-9060-6

[4] Hallsworth M., Berry D., Sanders M., Sallis A., King D., Vlaev I., et al. (2015), 'Stating Appointment Costs in SMS Reminders Reduces Missed Hospital Appointments: Findings from Two Randomised Controlled Trials' PloS ONE, 10(9)

[5] Kennedy, S. Survey of SME Taxpayers 2013. The Office of the Revenue Commissioners. Available from: http://www.revenue.ie/en/about/publications/business-survey-2013.pdf

behavioural insights were incorporated into the alternative letters and the parameters of the RCT methodology.

3. Methods

Letter Design

The letters were redesigned using a number of principles and previous findings from the behavioural economics/sciences literature. Letters 2 and 3 were completely redesigned with the aim of reducing did not attends by employing a package of behavioural insights. The intention was to include a number of behavioural insights tackling the main barriers which could be influencing people's decision to not attend their scheduled GIS.

Behavioural Insights

The specific insights included the following:

Personalisation

The client is addressed by their first name in the opening line of the letter. Research has shown that people are more likely to respond to communications utilising their first name[67].

Reciprocity

The client is told that the case officer has "booked you a place in an Intreo jobseekers Information Session". Previous studies have shown that people are more likely to enact a behaviour when someone has already done something for them[89].

Salience

By placing important pieces of information in boxes, bolding important messages, and using simple pictures, the client's attention is drawn to important messages.[10] People's attention span is limited. Highlighting key features using pictures and bolding can draw people's attention to important information quickly.

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[6] Postma OJ and Brokke M (2002), Personalisation in practice: the proven effects of personalisation, *Journal of Database Marketing* 9(2): 137–42

[7] Bargh JA (1982), Attention and automaticity in the processing of self-relevant information, *Journal of Personality and Social Psychology* 43(3): 425–36

[8] Cialdini, R. B., Vincent, J. E., Lewis, S. K., Catalan, J., Wheeler, D., & Darby, B. L. (1975). Reciprocal concessions procedure for inducing compliance: The door-in-the-face technique. *Journal of Personality and Social Psychology, 31,* 206-215.

[9] Fehr, E., & Gächter, S. (2000). Fairness and retaliation: The economics of reciprocity. *Journal of Economic Perspectives, 14,* 159-181

[10] Dolan, P., Hallsworth, M., Halpern, D., King, D., & Vlaev, I. (2010). *MINDSPACE: Influencing behaviour through public policy.* London, UK: Cabinet Office.

Social Norms

The message "did you know almost 3 out of 4 jobseekers from your area said the information session was useful to understand my options" is included in the letter. People often like to act as others do and are influenced by the opinions of others. Previous research has shown that social norms signal appropriate behaviour and are classed as behavioural expectations or rules within a group of people[11].

Simplification

The language within the letter has been simplified to make the letter easier to read. Additionally, pictures have been added to communicate key messages. Simplification is somewhat related to the fact that people have a limited attention span or limited "cognitive capacity". Research has shown that the easier it is for people to understand and process information, the more likely they are to enact a behaviour[12].

Timely Prompt/Channelling Effects

The client is prompted at the end of the letter to make contact if they cannot attend their scheduled appointment. The phone number to call is provided directly beside this prompt. A common cognitive bias is the status quo bias, which leads to inertia. When presented with making a choice people often delay and procrastinate[13]. Prompting encourages jobseekers to make be more proactive. It is likely that the client will be in a place where he/she can make a phone call when reading the letter. By placing the phone number beside the prompt, it makes it easier for the client to enact the behaviour immediately.

Observer Effect

The client is told "if you do not [contact us] we must record this as a missed appointment which could affect your payment". Previous research by the BIT in the UK has shown that this message was the most effective at reducing "did-not-attends" in local hospitals, because people's behaviour changes when they feel like they are being observed[14].

Experiential Avoidance

The word "group" has been removed from the letter. Following discussions with Intreo Office staff, it was noted that some jobseekers may not be attending due to experiential avoidance. Often when people are faced with participating in an experience which reminds them of something negative, people choose to

[11] *ibid*
[12] Lunn, P. (2014) Regulatory Policy and Behavioural Economics OECD Publishing., p10
[13] Madrian, B., & Shea, D. (2001). The power of suggestion: Inertia in 401(k) participation and savings behavior. *Quarterly Journal of Economics, 116,* 1149-1187.
[14] Hallsworth M, Berry D, Sanders M, Sallis A, King D, Vlaev I, et al. (2015) Stating Appointment Costs in SMS Reminders Reduces Missed Hospital Appointments: Findings from Two Randomised Controlled Trials. PLoS ONE 10(9): e0137306. doi:10.1371/journal.pone.0137306

avoid the situation altogether, even if avoiding the situation may actually worsen their circumstances[15][16]. To reduce the effects of experiential avoidance on DNAs, the word "Group" in "Group Information Sessions" was removed from letters 2 and 3, and sessions were simply referred to as Information Sessions.

Design Features

The biggest changes to letter 2 and 3 were made to simplify the language, present the information more clearly, and highlight the benefits of attending. As can be seen in Appendix F, both letters 2 and 3 used images and formatting to present information more clearly and make the benefits of attending more salient. For example, in letter 3, the benefits of attending were outlined in a section titled "why should I attend" and images were used to simplify the message and increase its salience. In addition, the language used was simplified and the letter was shortened to fit on one page.

The layout of the third letter also follows the rule of thirds which states that if you divide the page into 9 equal sections, the 3 parts of the document where the lines intersect represent the sections which people's eyes first scan. We can only process a limited level of information at a given time and examine only a few options. We are also programmed to process information through instinctive pattern recognition[17]. The rule of threes anticipates this behaviour by simplifying decision making. By placing important information on the sections of the page where people first look, it is more likely that they will read the key information.

Letters 2 and 3 also referred to the jobseeker by their first name, whereas the original letter used the jobseekers second name. Numerous studies have shown that personalising letters and text messages using people's first name can be an effective way to attract their attention[18].

Letter 3 featured wording which was found to be successful at reducing did-not-attends in hospitals in the UK through the use of SMS messages. In letter 3, the jobseeker is informed that "if you do not [attend], we must record this as a missed appointment and this may affect your payment". The BIT (UK) found similar messaging[19] produced an observer effect, meaning people were aware that someone would notice their non-attendance, which reduced DNAs.

Letters 2 and 3 also included a reciprocity prompt, as well as a social normative message in attempt to encourage attendance. The message "I have booked you a place in an Intreo Information Session" was included to encourage reciprocity among recipients. Previous studies have found that people are more likely

[15] http://link.springer.com/article/10.1007/s11166-009-9060-6
[16] Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47*, 263-291.
[17] J. A. Howard, Marketing Management, Homewood 1963; cf. M. B. Holbrook, "Howard, John A." in: P. E. Earl, S. Kemp (eds.), The Elgar companion to consumer research and economic psychology, Cheltenham 1999, p. 310-314
[18] Postma OJ and Brokke M (2002), Personalisation in practice: the proven effects of personalisation, Journal of Database Marketing 9(2): 137–42.
[19] The BIT (UK) did not include consequential wording like "this may affect your payment".

to help people who have already done something for them[20][21][22]. Jobseekers were also asked "do you know almost 3 out of 4 jobseekers from your area said the information session was useful to understand [their] options?" The message informs jobseekers that the majority of other jobseekers like them found the information sessions helpful. This may increase the jobseekers likelihood of attendance as people often like to act as others do and are influenced by the opinions of others.

It was theorized that making a number of behaviourally informed[23] changes to letters 2 and 3 would produce a larger effect than a single change in terms of reducing did not attends. While there may be an additive effect of making multiple changes to each of the experimental letters, it does produce a disadvantage in that it is difficult to identify the exact change to the letter that may have reduced DNAs. However, given that this trial is less concerned with generalizability of results than with identifying an improved letter to reduce DNAs, this was deemed to be an acceptable trade-off.

Table 3.1: Letter Design Features

	Letter 1	Letter 2	Letter 3
Personalisation	N	Y	Y
Reciprocity	N	Y	Y
Salience	N	Y	Y
Simplification	N	Y	Y
Timely Prompt/Channelling Effects	N	Y	Y
Experiential Avoidance	N	Y	Y
Social Norms	N	Y	Y
Observer Effect	N	N	Y

Notwithstanding the above, there were two points of difference between the letter designs:

- First, the observer effect is specifically included in letter 3 only;
- Second, letter 3 uses a more simplified format, utilising the rule of threes to communicate key information. The rule of threes has been shown in marketing to be an effective way of conveying information efficiently[24].

It is therefore possible to test different combinations of behavioural insights between letter 2 and 3.

[20] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/267100/Applying_Behavioural_Insights_to_Organ_Donation.pdf

[21] http://scholarship.sha.cornell.edu/cgi/viewcontent.cgi?article=1129&context=articles&sei-redir=1&referer=http%3A%2F%2Fscholar.google.com%2Fscholar%3Fq%3Dreciprocity%2Bcialdini%26btnG%3D%26hl%3Den%26as_sdt%3D0%252C5#search=%22reciprocity%20cialdini%22

[22] http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf

[23] Behaviourally informed interventions are those initiatives designed explicitly on previously existing behavioural evidence. Source: EU commission, BIAP (2016).

[24] Howard, J. A., (1963), *Marketing Management*, Homewood in: (eds.) P. E. Earl, S. Kemp (1999) *The Elgar companion to consumer research and economic psychology*, Cheltenham, UK: 310-314.

Trial Design

A Randomised Control Trial (RCT) design was used to determine whether either of the two redesigned letters was more effective in reducing DNAs than the original letter. RCTs involve randomly assigning a policy change (new letter type) to some people and not to others, so that researchers can be sure that differences are caused by the policy change, and not by other factors.

Jobseekers were randomly assigned, in even proportions[25], to one of three experimental conditions. Jobseekers could be randomised to receive either the original letter (control), letter 2 or letter 3 (for reference the letter templates can be found in Annex B). Randomisation occurred at the GIS level meaning that jobseekers were randomised to receive either letter 1, 2, or 3 each time a GIS was scheduled[26].

Data Collection

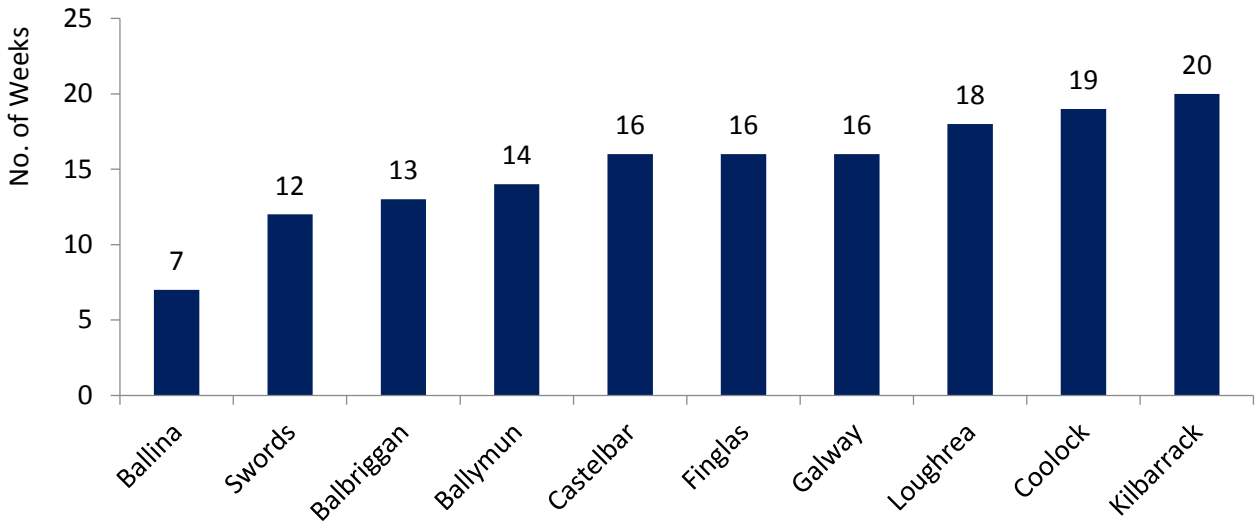
Data collection for the trial utilised a trickle sampling method. This was because in order to run the trial, the data collection procedures had to be consistent with the existing GIS scheduling procedures operated by Intreo offices. As discussed earlier, the Intreo process operates in three distinct stages. The point of interest for this trial is the transition between stage two; Integrated Decision, and stage three; Case Management.

As described earlier, every week, each Intreo centres selects up to 30 jobseekers, to send an invitation letter to for the next scheduled GIS[27]. To account for this process, the jobseekers were randomised as they entered the Intreo process and were scheduled for a GIS, rather than being randomised from an existing complete list. In practice, this meant that every week, once a list of the jobseekers to attend a GIS had been scheduled, a member of the AST would manually randomise the 30 jobseekers in that list to receive one of the three letters. Data was collected on a weekly/bi-weekly basis depending on each Intreo office's GIS schedule. The data was then sent to the research team who validated the randomistion procedure.

The trial was operated across 10 offices over a period of 20 weeks from the 4th May to the 20th October. Due to local operational challenges, not all offices initiated the trial at the same time or were able to achieve the full 20 weeks. Intreo centres in the North of Dublin started collecting data in May, while offices in Galway and Mayo started collecting data at the end of June. As shown in Figure 3 below the majority of offices ran the trial for 16 weeks or more, however four did not.

[25] The randomisation procedure represented a traditional blocked randomisation design as jobseekers were randomised in even proportions to one of the three experimental conditions.
[26] For a detailed description of how the trial operated in respect of the Intreo process see Annex A.
[27] Some smaller Intreo offices sometimes scheduled less than 30 jobseekers at a time due to smaller numbers.

Figure 3.2: Trial Duration, No. of Weeks by Office



Data collection templates were constructed for each week of the trial for each of the participating Intreo centres, using Excel spreadsheets. Participants' information was collected manually during the appointment scheduling process at local office level. Case officers inputted the list of the participant's scheduled for engagement in each week into the template. The data collected during this phase of the process was then linked to the Department of Social Protection's Jobseeker's Longitudinal Database to source adiditonal labour market data. A final dataset was then compiled to run the analysis.

Power Calculations

The decision to create three experimental groups was guided by a power analysis. The study was powered to detect a change of 5 percentage points in the DNA rate, with 80% power, as this was considered to be the minimum change required to motivate management to re-design the invite letter in the case of positive findings from this study. The power calculations indicated that that a sample of 4,644 participants would be required to obtain this power.

Reviewing historical appointment data, it was estimated that based on average total monthly inflows of 1,200 it would take four months to collect the required sample. However, as noted earlier the Intreo centres in Galway and Mayo started participating in the trial later than the Dublin North offices which increased the amount of time needed to collect the necessary sample.

Calculation of Sample Size

To estimate the potential available population to build the sample, the previous year's in-flows for the Dublin North Division and the West Division were used. As shown in Table 2, over the period of May to end of September the expected in-flows were 5,117. When extended to end December the number rises to 8,336.

Table 3.2: Estimated Total inflows for Trial

Period	May - Sept	May - Oct	May - Nov	May - Dec
Total in-flows of new entrants	5,117	6,098	7,391	8,336

Based on this analysis it was concluded that a 20 week trial, running from the beginning of May to end of September would be enough to collect a sufficient sample size to achieve a statistically significant result.

The sample was calculated to target a 5 percentage point improvement in the DNA rate[28]. An analysis of average DNA rates in the North Dublin Division over the 6 month period August 2015 to January 2016 showed an average rate of 47%, i.e. 53% of jobseekers attended a GIS after their first scheduled GI session.

To achieve a statistically significant increase in attendance of 5 percentage points, from 53% to 58% a sample size of 3,096 was estimated in the case of a binary treatment. This was based on an 80% power requirement at a confidence level of 0.05. To accommodate a three way treatment, the minimum sample size was 4,644 (See Experimental Setup below).

Experimental Setup :

[28] Note according to the literature on the use of letters to address DNAs, the effect size estimates can vary significantly and are often context specific. For the purposes of this study a five percentage point effect size was deemed to be the most practicable. This was for two reasons. First, five percentage points was deemed to be conservative given the range of estimates found in the literature; and second, the scope for increasing the sample size was constrained by the operational demands of activation service teams at local office level and limited window of opportunity within which to run the trial. However, in reality the effect size may actually be smaller and if this was the case, a higher sample size may be necessary to detect a significant effect.

Randomisation

Randomisation was conducted as follows. Each participant was assigned an ID alongside their PPSN[29]. These ID's were appointment specific and were assigned based on the participants order in the appointment schedule. Participants' IDs were then randomised by members of the AST using an online randomisation tool[30]. The randomised list of IDs was then copied from the online tool and pasted into Excel where a Vlookup[31] formula would reorganise the list of PPSN's to match the randomised list of ID's. A member of the AST would then assign equal blocks of participants to each experimental condition[32]. Overall, the process represented a manual application of random blocked assignment.

Randomisation was applied to appointments, rather than to participants, which means that participants could receive the same or different reminder(s) over the course of the study. Randomisation occurred at the office level as jobseekers are asked to attend their local Intreo office for their GIS, and sessions are scheduled at the office level.

Data Issues

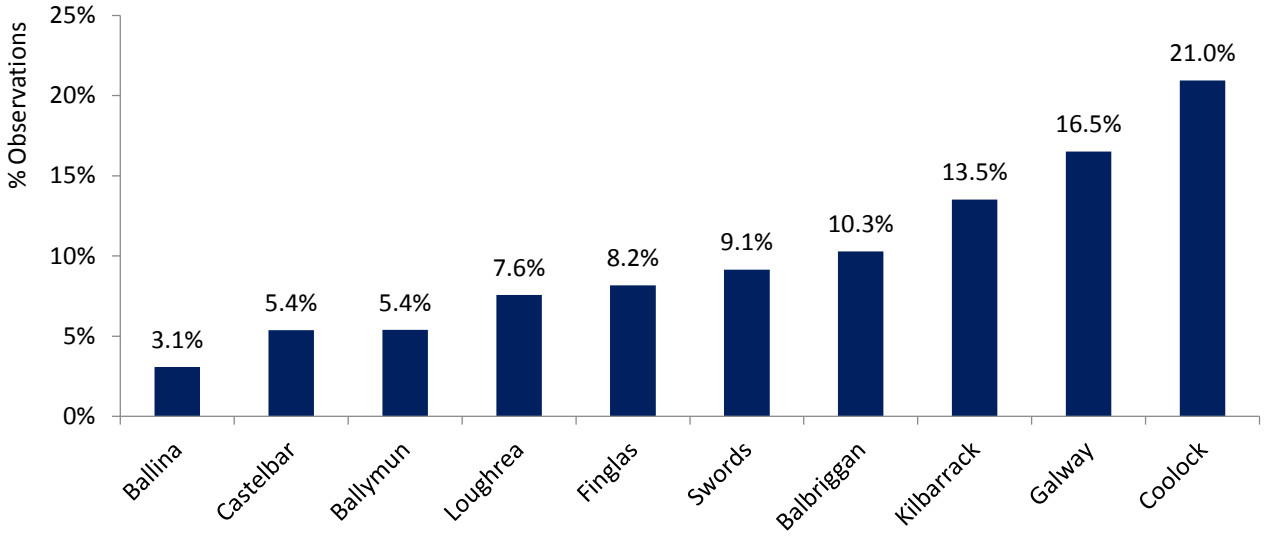
However, due to operational challenges at local office level, there were a number of complications for data collection. These included:

- Staff failure to send letters to jobseekers;
- Change in staff members responsible for running trial ;
- Incorrect randomisation of jobseekers;
- Change in day of GIS;
- Inclusion of extra jobseekers after the letters had been issued;
- No claim processing during August due to lack of available staff in particular offices;
- Issuing of second reminder letter as part of Jobs Week events;
- Variation in the duration of the trial by office (see Figure 3 above).

As a consequence of these operational issues, the number of observations varied between offices (see Figure 3.3 below).

[29] These ID's were used as they were to be entered into an online randomisation tool, and due to data protection concerns it was decided not to enter PPSN's on an external website.
[30] The randomisation was performed by activation service team members using the list randomiser available on random.org.
[31] A Vlookup formula looks up a specified value stored in a vertical list (column) in excel and returns data from a specified column in the same row as the lookup value.
[32] For example, if 30 participants were scheduled to attend, the first 10 would be assigned to the control group, the second 10 would be assigned to treatment group 1, and the last 10 would be assigned to treatment group 3. As the list has already been randomly ordered, this process represents blocked randomisation.

Figure 3.3: Trial Observations by Office, Full Sample (n=4,395)



The total number of observations collected for the study was 4,956. However, due to the issues noted above, the total useable sample after cleaning for error and missing data was 4,395. To build the multi-variate model incorporating demographic and labour market data, the clean sample had to be matched with the DSP's administrative datasets. Due to reporting lags and missing data it was only possible to match 83% of the sample. After matching with the additional variables and balancing, the sample was reduced to 3,600. A simple randomisation procedure was used to maintain balanced control and treatment groups. As shown in Table D.2, Appendix D post randomisation all three letter groups were broadly balanced across key socio-demographic and labour market characteristics.

Profile of RCT Participants

Using the administrative data available from the DSP's Jobseekers Longitudinal Database (JLD), it was possible to build a demographic profile of a subsample of the RCT participant jobseekers. However, as it was not possible to provide a comprehensive profile for all of the participants, these descriptions should therefore only be treated as indicative (see Figures 3.4.A to 3.4.F for details).

Gender, Age and Family Composition

The majority of the jobseekers in the study were male, approximately 56%. A substantial proportion of the participants were aged less than 25 years old with a further 27% between the ages of 25 and 35 years old. 18% were between their mid-thirties and mid-forties. Less than 15% were aged 45 or over. Over 80% had no dependents. About 10% had child dependents only with a further 7% having an adult dependent and child dependents. 2.5% had only adult dependents.

Live Register Experience

Over three quarters of the participants in the subsample had less than one years' worth of cumulative live register experience. However, less than 1% had no previous experience of the Live Register at the time of the trial. 20% had between one and five years' experience, while over 3% had in excess of five years cumulative experience eon the Live Register.

Weekly Rate of Payment

At the time of the RCT, almost 9% of participants were not in receipt of any payment and almost one in five were receiving less than €100 per week. Approximately 11% received between €100 and €144 in welfare payments. Over a third received between €144 and €188 and over a quarter were receiving more than €188 per week.

Occupational Background

The largest occupational category was professional and/or management at 19%. The second largest was those with no known previous occupation. The smallest category was trades followed very closely by personal and/or protective occupations and administrative occupations respectively.

In sum, the majority of jobseekers in the trial were single males, with no dependents and aged under 25 years old. A majority had both previous employment and unemployment experiences. Very few could be considered long term unemployed.

Figure 3.4: Jobseekers' Characteristics, Subsample (n=3,600)

Figure 3.4.A: Time on Live Register, MV Subsample (n=3,600)

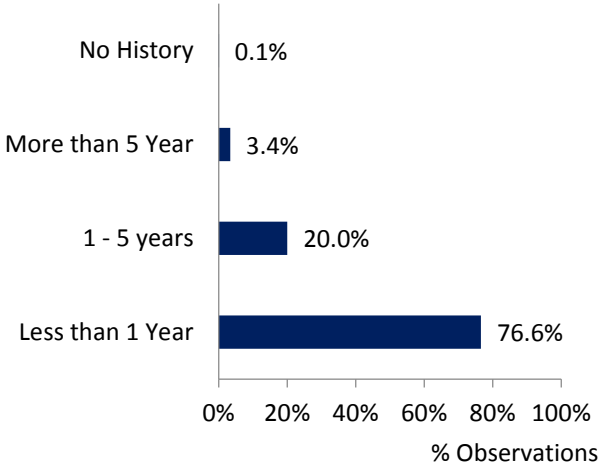


Figure 3.4.B: Jobseekers' Weekly Rate, €, MV Subsample (n=3,600)

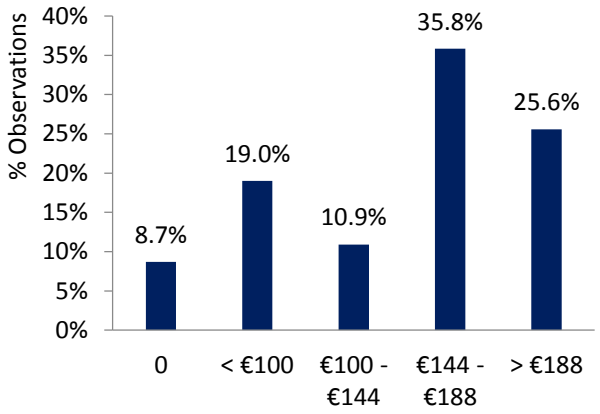


Figure 3.4.C: Jobseekers' Family Status, MV Subsample (n=3,600)

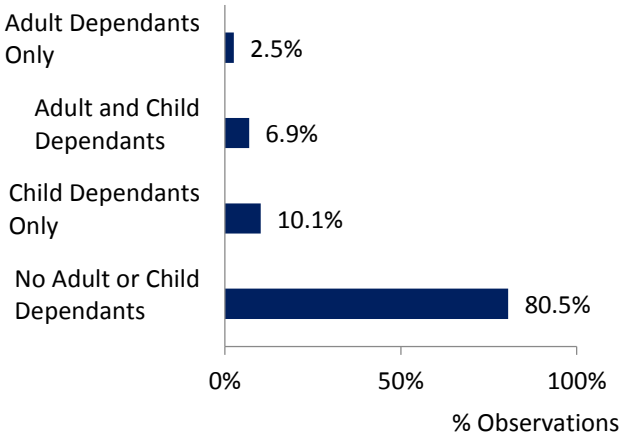


Figure 3.4.D: Jobseekers' Age MV Subsample (n=3,600)

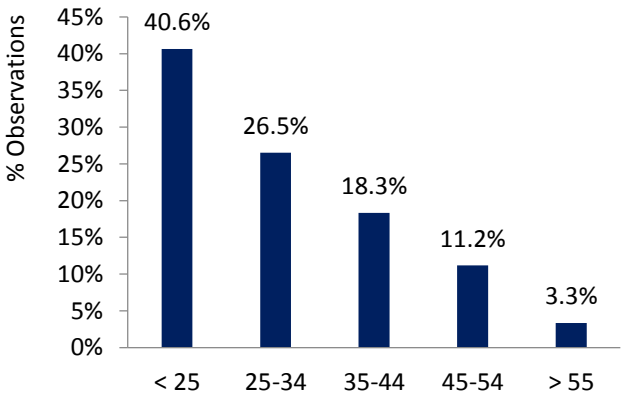


Figure 3.4.E: Jobseekers' Gender, MV Subsample (n=3,600), % Observations

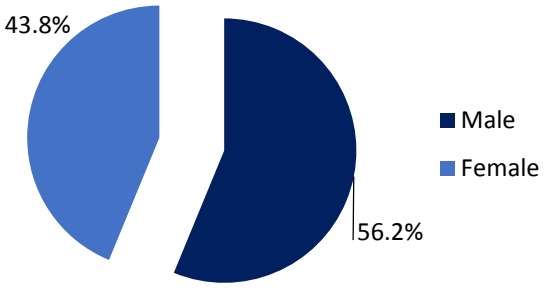
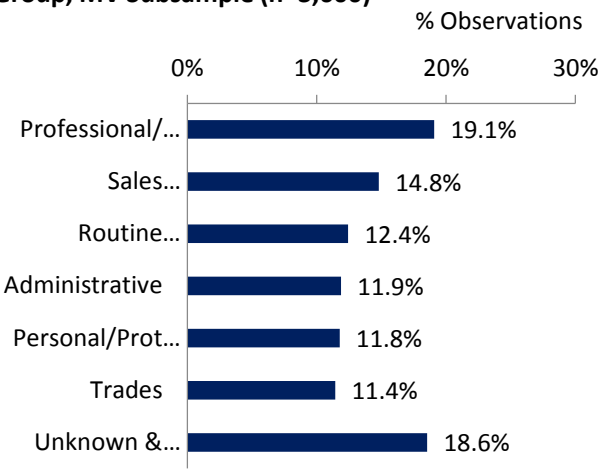


Figure 3.4.F: Jobseekers by Occupational Group, MV Subsample (n=3,600)



Analysis Methodology

To evaluate the impact of the different letter designs on attendance rates, the study involved several stages.

First a descriptive analysis outlines the observed impacts of each letter type. The analysis breaks down the results in terms of the proportion of participants that were recorded in one of four possible outcomes for each letter type, i.e. the proportions that were found to have attended, did not attend, cancelled and rescheduled. To validate the raw observed results and ANOVA analysis was also undertaken to test the statistical significance of the differences. This was followed by a descriptive analysis of the secondary research questions[33].

The second stage of the analysis utilises inferential statistics to test for causal relationships between the letter types and behavioural responses. Two sets of test were applied. The first explored the simple binary responses of attending versus not attending comparing letter 2 and letter 3 against letter 1.

The second set of tests examined the effect on the other outcomes relative to attending for each letter type relative to letter 1. The rationale for this model is to accommodate the multiple response types possible and examine how the different letters interact with these responses.

The third and final stage of the analysis is a cost-benefit analysis of the use of the alternative letter designs.

Inferential Model Specifications

The primary model focuses on attendance rates. It regresses a binary dummy for attendance on the letter type using Letter 1, the control, as the reference category. The test incorporates a logistical design to account for the multi-level responses.

The test is first applied to the full sample of 4,395 using the naïve estimator specified below:

$$\text{Naïve Estimator: } Y(Attendance) = \beta_0 + \beta_1\big(Letter\ Type\big) + \varepsilon_i$$

To account for additional other factors and as sensitivity test on the main findings several socio-economic predictor variables are included in a multi-variate estimator. These include basic demographic information as well as labour market characteristics (see Appendix D for details). This involves running the tests on the multivariate subsample of 3,600.

In addition, as a check for possible bias entering the model due to the exclusions caused by missing data as described earlier, the naïve estimator is also applied to the multi-variate subsample.

[33] Due to the power limitations of the sample it was not possible to test the secondary research questions using inferential statistics

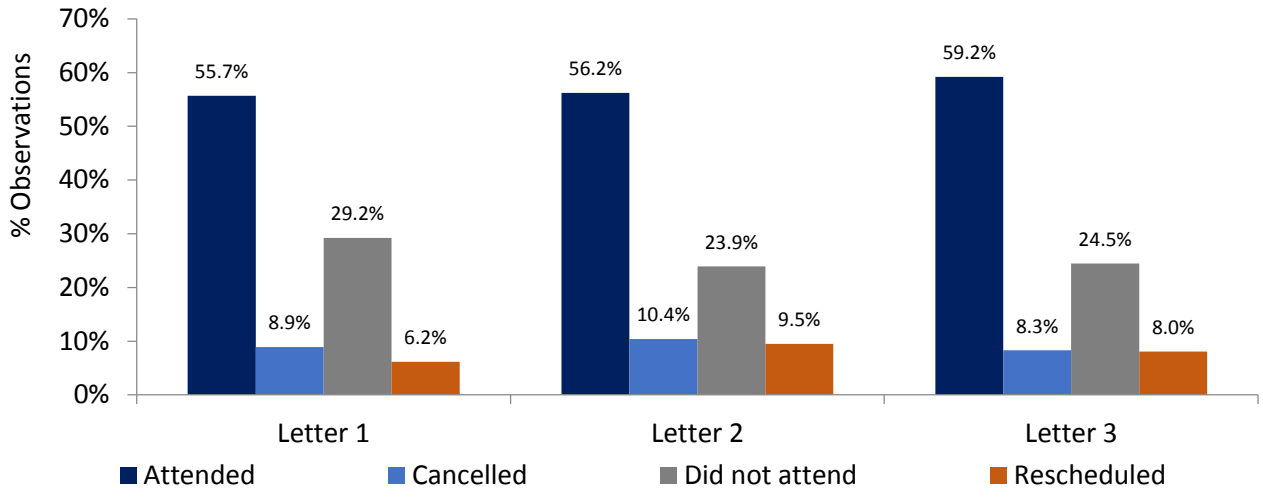
A secondary set of inferential tests using a multinomial outcome variable was also applied to explore the interactions between the other three possible outcomes including rescheduling, cancelling and not attending without any notification. These tests also incorporated the naive and multi-variate estimators as specified above.

4. Results

Stage One - Descriptive Results

The first set of results provides a descriptive account of the observed responses of the trial. It is evident from Figure 4.1 that both letters 2 and 3 performed better regarding attendance rates. The attendance rate for letter 3 in particular was almost 4% higher than letter 1. Interestingly, while the rate of DNAs was highest for letter 1, letter 2 outperformed letter 3. Regarding the proportion that cancelled, letter 2 was notably better than the other two letters. Interestingly, letter 1 is better than letter 3 on this score. Regarding the proportion that rescheduled letter 2 is also the best performing followed by letter 3 and then letter 1. (Note for a detailed breakdown of the results by office see Appendix C.)

Figure 4.1: Responses by Letter Type, Full Sample (n=4,395)



As a robustness check upon the observed responses, an ANOVA test was carried out. The ANOVA tests sought to examine whether the mean responses for each letter type were different from each other. In this case the differences in the mean responses were found to be statistically significant, indicating correlation between the response type and the type of letter received by the jobseeker (results of ANOVA tests can been found in Appendix B).

In addition to the main results, the other policy dimensions are addressed below[34]. The letter performance is examined across four additional variables including:

- Effect of family composition of letter performance;
- Effect of weekly rate on letter performance;
- Effect of delay between letter issue date and GIS appointment.

To explore these relationships, the analysis was based on the multi-variate sub-sample in order to incorporate the relevant variables.

Figure 4.2 below shows the results for family type, i.e. the presence of dependents. The findings indicate that in general jobseekers with dependents were more likely to attend than those without. It is also evident that Letter 3 performs best in each family type. Interestingly letter 1 outperforms letter 2 in the case of ADAs only and where there are no dependents being claimed for.

Figure 4.2: Attendance Rate by Letter by Family Type, MV Subsample (n=3,600)

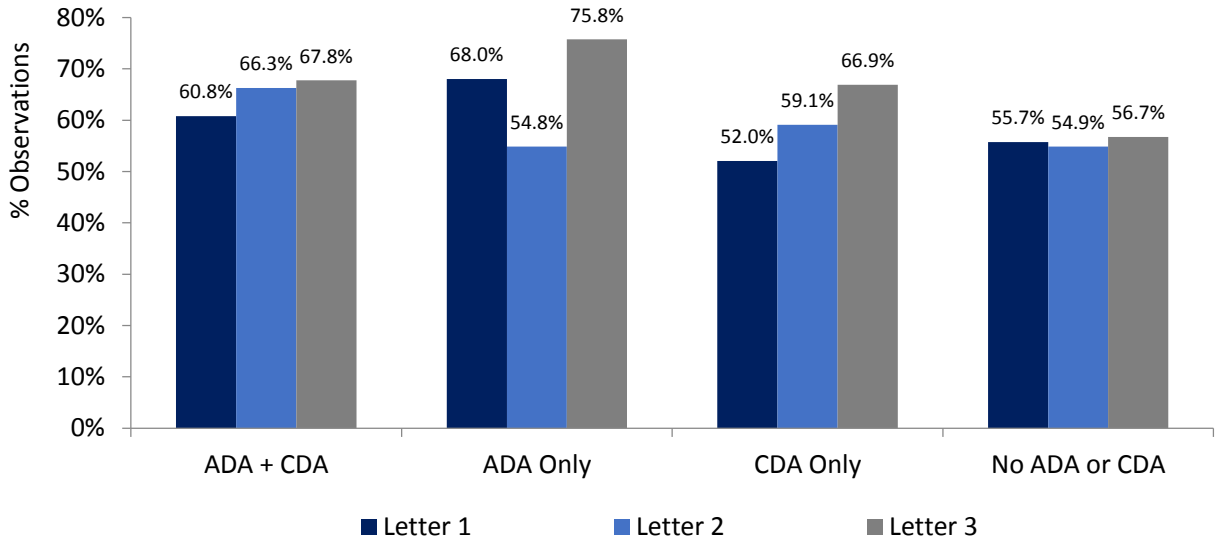


Figure 4.3 presents the findings for the role of the weekly rate. The findings indicate a positive relationship between the level of the weekly rate and the attendance rate. Interestingly in the case of no payment, letter 1 had the highest levels of attendance. In addition, those with the highest rates had high attendance regardless of letter type. In terms of letter performance, the picture is mixed, although letter 3 performs best in three of the five categories.

[34] Note in each of these cases, the results must be treated as indicative as they were not specifically modelled as part of the RCT design. Specifically, the sample size used to run the RCT is not large enough to achieve statistical significance across multiple variables or address the risk of selection bias.

Figure 4.3: Attendance Rate by Letter by Weekly Rate, MV Subsample (n=3,600)

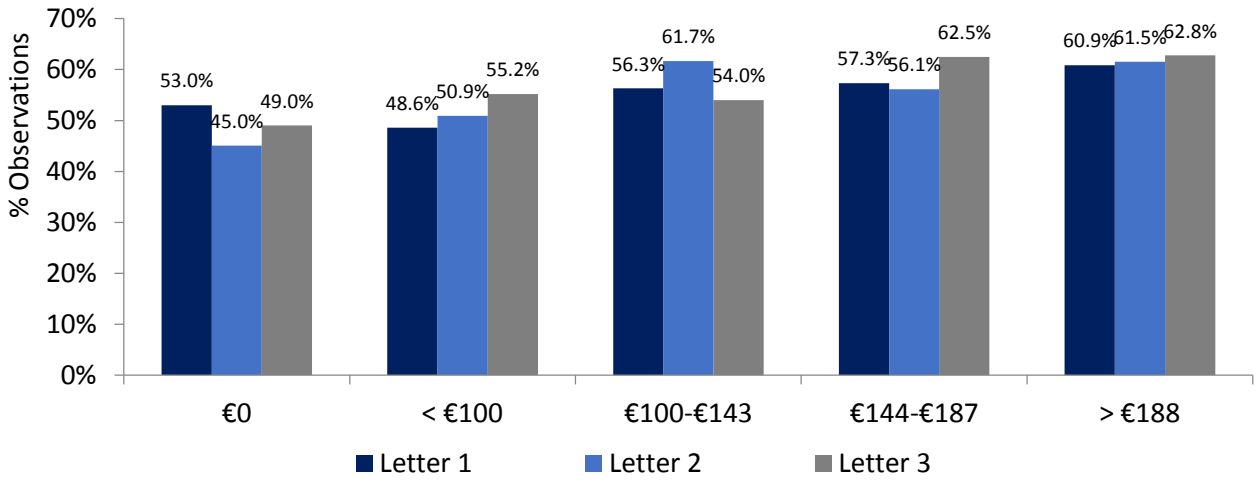
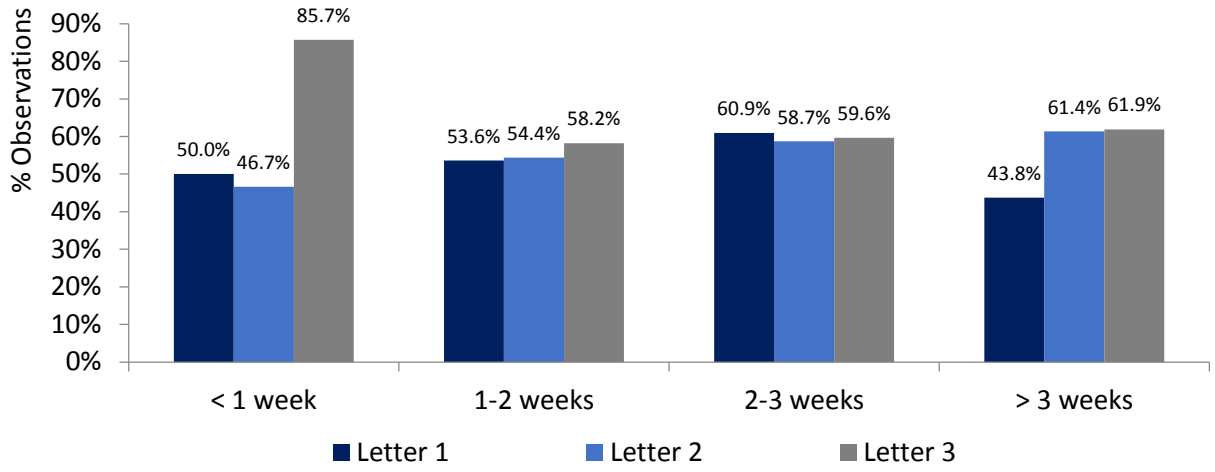


Figure 4.4 presents the results for the effect the duration between the letter issue date and the GIS appointment date had on attendance rates. Letter 3 performed best in three of the four categories, most notably in the case of a delay of one week or less. Letter 1 is marginally better than the two treatment letters for the 2-3 week group.

Figure 4.4: Attendance Rate by Letter by Delay Duration, MV Subsample (n=3,600)



The main findings from the descriptive analysis can be summarised as follows:

- Letter 2 and 3 outperform letter 1 in terms of attendance. The observed attendance for letter 3 was the highest. Regarding DNAs, both letter 2 and 3 also outperform letter 1, although letter 2 is better than letter 3 Letter 2 also performs best in regard to rescheduling and cancellations.

- In general attendance is higher for jobseekers that have dependents compare to those that don't. This effect is greatest for letter 3.
- There is evidence of a positive relationship between attendance and the level of the weekly rate the jobseeker receives. The results suggest the higher the weekly rate, the higher the attendance rate.
- The observed responses by the duration of the delay between the issuing of the invitation letter and the date of the GIS appointment are ambiguous. For the most part there is little variation, however there is a notably higher attendance rate for letter 3 where the GIS occurs within one week of the issue date of the letter.

Stage Two - Inferential Test Results

The next stage of the analysis assesses the strength of the causal link between the letter designs and the responses in Figure 4.1. Table 4.1 shows the results of the logit regression which estimates the difference in the probability of attended a GIS of letter 2 and letter 3 when compared to letter 1. The results of three models are shown. The Naïve Model I shows the results regarding the full sample. Naïve Model II shows the results of the naïve estimator as applied to the multi-variate subsample. The MV Model shows the results of the multi-variate model as applied to the multi-variate subsample (the detailed full results for all regression tests can be found in Appendix E).

Under each model there is a positive effect found for both letters 2 and 3 compared to letter 2 with one exception. Under the Naïve Model I jobseekers that received letter 2 are found to be 3.8 percentage points less likely than jobseekers that received letter 1 to attend. However none of these estimates were found to be statistically significant.

Table 4.1: Binary Logit Regression Results: Difference in Probability of Attendance relative to Letter 1

	Letter 2	**Letter 3**
Naïve Model I	-0.038	0.095
	(0.074)	(0.074)
Naïve Model II	0.007	0.133
	(0.082)	(0.083)
MV Model II	0.003	0.121
	(0.084)	(0.085)

Note:*p<0.1; **p<0.05; ***p<0.01

The next set of test results detailed in Table 4.2 are derived using the same models as detailed in Table 3, except replacing the binary estimator with a multinomial estimator. The multinomial estimator examines the change in the probability of not attending, rescheduling and cancelling relative to attendance for the jobseekers that received letters 2 and 3 against the control letter 1. The results show the percentage point difference between each letter type in respect of the probability of responding by not attending, cancelling and rescheduling compared to attending. The results are as follows:

- Under each of the models jobseekers that received letter 2 were found to be less likely than jobseekers than received letter 1 to not attend compared to attend. A statistically significant increase of 19 percentage points was found under the Naïve Model II and the MV model. However, it was only found to be significant at the 90% confidence level in both cases.
- Jobseekers that received letter 2 were found to be more likely than the letter 1 jobseekers to reschedule than to attend under each model. This was found to be significant at the 99% confidence level for the Naïve Model and the MV model.
- In each model jobseekers that received letter 2 were more likely than the letter 1 jobseekers to cancel than to attend. However, none of these results were statistically significant.

Table 4.2: Multinomial Logit Regression Results: Letter 2 versus Letter 1

	Did not attend	**Rescheduled**	**Cancelled**
Naïve Model I	-0.127	0.483***	0.119
	(0.087)	(0.139)	(0.127)
Naïve Model II	-0.189*	0.407**	0.162
	(0.097)	(0.159)	(0.143)
MV Model	-0.187*	0.457***	0.200
	(0.100)	(0.164)	(0.147)

Note:*p<0.1; **p<0.05; ***p<0.01

Table 4.3 details the multinomial models in relation to the differences between letter 1 and letter 3 for each response type. The results are as follows:

- Under each of the three models jobseekers that received letter 3 were found to be less likely than jobseekers than received letter 1 to not attend compared to attend. The percentage point difference ranged from 16 to 23 points. Under Naïve Model I and the MV model, this was statistically significant at the 90% confidence level. Only under Naïve Model II was the effect found to be significant at the 95% level.
- There were no statistically significant effects for rescheduling or cancellations under any of the models.

Table 4.3: Multinomial Logit Regression Results: Letter 3 versus Letter 1

	Did not attend	Rescheduled	Cancelled
Naïve Model I	-0.155*	0.214	-0.171
	(0.086)	(0.145)	(0.133)
Naïve Model II	-0.225**	0.201	-0.125
	(0.096)	(0.163)	(0.150)
MV Model	-0.190*	0.224	-0.092
	(0.099)	(0.168)	(0.154)

Note:*p<0.1; **p<0.05; ***p<0.01

The main findings from the inferential tests can be summarised as follows:

- There was no statistically significant relationship between the letter type and the probability of attending
- There was statistically significant evidence of a higher probability of rescheduling for the jobseekers that received letter 2 compared to jobseekers that received letter 1.
- There was statistically significant evidence of a lower probability not attending for jobseekers that received letter 2 and letter 3 compared to jobseekers that received letter 1.

Stage Three - Cost-Benefit Analysis

To assess the tangible benefits of increased attendance arising from the simplification of GIS invite letters, a cost-benefit analysis was conducted. The benefits, in terms of time saved as a result of increased attendance, were calculated using the observed differences in DNA rates, i.e. the results of the descriptive analysis, between the two treatment letters and the standard DSP letter. As can be seen in table D.2, DNA's decreased by 3.3% among the group of jobseekers that received letter 3 compared to those who received the original letter.

The benefits were defined in terms of the monthly per unit cost of postage and printing associated with the letters and the monthly person hours required to schedule and run the GIS appointments. The data for these metrics were sourced from the six Dublin North Division Intreo Office's involved in the RCT[35].

The time savings figures were calculated by asking members of the AST to detail and time all of the steps undertaken when a client fails to attend their scheduled GIS appointment. Three offices provided responses and Table 4.4 below details the steps involved and the time necessary to complete each step.

[35] Note, as the underlying data were sourced from the specific offices involved in the RCT they may not be representative of the relative costs form office to office. There the savings estimates should only be treated as indicative.

The cost benefit analysis was calculated using the observed differences in DNA rates, i.e. the results of the descriptive analysis, between the two treatment letters and the standard DSP letter.

The benefits were defined in terms of the savings produced as a result of a reduction in the DNA rate. When a client DNA's it incurs additional costs in terms of extra postage and printing associated with additional invite letters and additional person hours which are required to re-schedule and re-run the GIS appointments. The data for these metrics were sourced from the Intreo Offices involved in the RCT[36].

To calculate the overall benefits the estimates were generalised to the total Intreo office network on a 12 month basis. Tables 4.5 and 4.6 detail the calculations used in the calculation of the estimates.

Table 4.4: Details of the Intreo Process when a client DNA's

When a Client DNA's…	This takes "X" minutes
The AST update the attendance status code ACM and enters the client's name in the attendance diary.	3
The AST then issues a 'call & see us' letter regarding a verbal/written warning	11
The client's claim is "Payment Suspended" on ISTS. Remarks on the individual case are inserted on ISTS.	10
If there is no response, the claim is closed following 2-3 weeks on "Payment Suspended"	2.2
When the client presents or calls the Intreo office, they are rescheduled for another appointment.	7
Total	**33.2**

Estimated time savings were calculated for all 12 Intreo offices on a monthly and annual basis as shown in Table 4.5 and Table 4.6 respectively. Time savings are calculated by multiplying the number of DNA's in a month/year for all Intreo Offices by the observed reduction in DNA's as a result of the jobseeker receiving letter 2 or 3 compared to the original letter, multiplied by the amount of time it takes an AST member to process a DNA when a client does not attend. In this way, the savings are calculated as the total amount of time saved as a result of a decrease in did-not-attends due to the introduction of a behaviourally designed

[36] Note, as the underlying data were sourced from the specific offices involved in the RCT they may not be representative of the relative costs from office to office. Therefore these savings estimates should only be treated as indicative.

letter. If a client attends instead of not attending, then the time that it would take the AST to follow up with the client is saved.

Table 4.5: Monthly Time Savings (Person Hours and Mins), All Offices

Time Savings Per Month - All Intreo Offices	Letter 2 Using Observed Difference	Letter 3 Using Observed Difference
[A] Number of DNA's per month (All Intreo Offices)	3,015	3,015
[B] Time Savings - Attendance vs DNA (Mins)	33.2	33.2
[C] Effect of Letter (% Reduction in DNA's)	4.30%	3.30%
[D] Total Time Savings (Mins) [AxBxC]	4,304.69	3,303.60
Total Time Savings Per Month (in Hrs and Mins) [D/60]	**72 Hours and 24 Minutes**	**55 Hours and 4 Minutes**

Table 4.6: Annual Time Savings (Person Hours and Mins), All Offices

Time Savings Per Year - All Intreo Offices	Letter 2 Using Observed Difference	Letter 3 Using Observed Difference
[A] Number of DNA's 2016 (All Intreo Offices)	36,184	36,184
[B] Time Savings - Attendance vs DNA (Mins)	33.2	33.2
[C] Effect of Letter (% Reduction in DNA's)	4.30%	3.30%
[D] Total Time Savings (Mins) [AxBxC]	51,656.28	39,643.19
Total Time Savings Per Year (in Hrs and Mins) [D/60]	**861 Hours and 33 Minutes**	**660 Hours and 43 Minutes**

Estimated cost savings were also calculated for all 12 Intreo offices on a monthly and annual basis as shown in Table 4.7 and Table 4.8 respectively. When a client does not attend, an additional letter is sent to the client asking them to present to/call the Intreo office. If the behaviourally informed letter causes the client to attend rather than DNA, then there is no need to send the additional letter. As a result, the cost of that

additional letter is saved. The cost saving is calculated by multiplying the number of did-not-attends in a month/year for all Intreo Offices by the observed reduction in DNA's as a result of the jobseeker receiving letter 2 or 3 compared to the original letter, multiplied by the total cost of the letter. The total cost of the letter is made up of printing costs (paper and ink) and postage costs. Tables 4.7 and 4.8 detail the figures used in the calculation of the estimates of cost savings.

The costs associated with this intervention, if it is implemented would be negligible insofar as the same postage and printing costs and person hours would arise as a result of sending the original letter. As the only change to the process would be changing the letter automatically issued to the client from ACM, there is likely to be little to no cost of implementing this intervention.

Table 4.7: Monthly Cost Savings (Postage and Printing), All Offices

Cost Savings Per Month - All Intreo Offices	**Letter 2** **Using Observed Difference**	**Letter 3** **Using Observed Difference**
[A] Number of DNA's per month (All Intreo Offices)	3,015	3,015
[B] Effect of Letter (Reduction in DNA's)	4.30%	3.30%
[C] Postage per invite	€ 0.72	€ 0.72[37]
[D] Printing per invite	€0.0049	€0.0049[38]
[E] Total Cost per invite [C+D]	€ 0.72	€ 0.72
Total Cost Savings Per Month [A*B*E]	**€ 93.98**	**€ 72.13**

[37] Source: An Post, Postal Rates. Available from: http://www.anpost.ie/AnPost/PostalRates/Standard+Post.htm
[38] Source: Divisional Support Team, Department of Social Protection.

Table 4.8: Annual Cost Savings (Postage and Printing), All Offices

Cost Savings Per Year - All Intreo Offices	Letter 2 Using Observed Difference	Letter 3 Using Observed Difference
[A] Number of DNA's 2016 (All Intreo Offices)	36,184	36,184
[B] Effect of Letter (Reduction in DNA's)	4.30%	3.30%
[C] Postage per invite	€ 0.72	€ 0.72
[D] Printing Per Invite	€0.0049	€0.0049
[E] Total Cost per invite [C+D]	€ 0.72	€ 0.72
Total Cost Savings Per Year [A*B*E]	**€ 1,127.88**	**€ 865.58**

5. Discussion

Both descriptive and inferential tests were used to assess the performance of each of the three letters in reducing DNA's. The results of every test conducted found that both letter 2 and letter 3 were more effective in reducing did-not-attends and maximising attendance than letter 1. This indicates that there is merit in applying behavioural economic insights to how the State engages with the public to improve the efficiency and effectiveness of the state's communications.

While it is clear that both letters 2 and 3 outperform the original letter, choosing the most effective letter between letter 2 and 3 is more difficult. The descriptive analysis showed that while letter 3 performed best in terms of maximising attendance, letter 2 had the lowest DNA rate. Letter 3 also showed the lowest cancellation and rescheduling rates. This indicates that overall letter 3 was most effective. On the other hand, when the inferential results were analysed, neither letter 2 or 3 were shown to have significantly significant effects on the probability of attendance. However, the multinomial model showed that letter 3 was found to outperform letter 2 in terms of DNA rates. It is also worth noting that these inferential tests were conducted on a smaller sample than recommended by the powers analysis as a result of issues with data collection and matching. More simply, while letter 2 and 3 outperform letter 1, it is not clear whether letter 2 or 3 perform differently to each other.

These mixed results represent the practical realities of conducting randomised control trials in a policy environment. From time to time trials may not produce clear evidence. The literature suggests that the effects of similar trials can be marginal even where the trials involve considerably larger populations[39] [40]. While the results of an RCT may not provide a clear cut answer every time due to implementation issues, it is possible to consider all of the available evidence, on balance. In other words, based on all of the findings from the multiple tests conducted as part of this study, it is possible to assess which letter is the most likely to reduce DNA's by the largest amount and on the most consistent basis.

[39] Hallsworth, M., List, J., Metcalfe, R. & Vlaev, I., (2014), 'The Behavioralist As Tax Collector: Using Natural Field Experiments to Enhance Tax Compliance', NBER Working Paper, 20007.

[40] Haynes, L.C., Green, D.P., Gallagher, R., John, P. & Torgerson, D.J., (2013), 'Collection of Delinquent Fines: An Adaptive Randomized Trial to Assess the Effectiveness of Alternative Text Messages', Journal of Policy Analysis and Management, 32: 718–730.

Table 5.1: Summary of Findings for Attendance

Test Conducted	Favours Letter 2 or 3?
Descriptive Analysis (Full Sample)	3
Descriptive Analysis (MV Sample)	2
Inferential Analysis (Binary Model)	NA
Inferential Analysis (MNL Model)	3

Based on the results of a simple descriptive analysis using the full sample of clients, letter 3 was most effective in terms of reducing DNA's and maximising attendance. Using a smaller sub-sample, the descriptive analysis shifts in favour of letter 2. However, using both samples, the inferential analysis, which should be given stronger weight in terms of the evidence it provides, clearly indicates that letter 3 is the most effective in reducing did-not-attends. On the balance of all of the evidence available it would appear that letter 3 is the most effective in reducing DNA's and maximising attendance.

It is important to note some of the differences between letter 2 and letter 3 to explore some possible reasons for their differing levels of effectiveness. Letter 3 several design differences relative to letter 2. Letter 3 explicitly included the observer effect in its design. The evidence indicates that the use of direct language concerning the consequences of failure to attend a GIS coupled with a simpler letter design improved performance.

The descriptive analysis also explored the relationship of the family composition, the weekly rate and the delay between the notification date and the GIS appointment date with outcomes. Regarding the overall pattern of behaviour in respect of these variables there was several general findings. However, it should be noted that these findings are based on descriptive analysis only, and so should be interpreted as suggestive rather than conclusive.

Concerning the family type, the results suggest that, in general, that jobseekers with dependents were more likely to attend than those without. Looking at the relationship between the level of weekly payment received by the client and attendance outcomes, the findings indicated that the higher the payment, the better the attendance. The findings also seem to indicate that sending GI session invite letters within one week of the appointment date had a positive effect on attendance. Each of the three letters were less effective in terms of attendance rates when letters were sent more than one week in advance of the GI session. This may reflect the fact that sending a letter closer to the date of the appointment is more effective

in increasing attendance as the length of time between receiving the letter and the actual appointment date is short enough that the client does not forget about their appointment.

Across each of these variables, letter 3 outperformed the other two letters and letter 1 was the worst performer in the majority of cases. However, in the case of the weekly rate, letter 1 was better than either of the other two letters for those with no payment. This suggests that financial incentives were also important in terms of engagement.

Conclusions

- **On the balance of evidence, letter 3 (Annex B) was shown to be the most effective in reducing DNA's and maximising attendance.**
- Letter 2 (Annex B) is the most effective in encouraging jobseekers to reschedule when they cannot attend their appointment.
- The original letter (Annex B), letter 1, performed poorest, with the highest rates of DNA's, and the lowest rates of attendance and rescheduling.
- GI Session invite letter 3 is the most effective when sent less than one week before the actual date of the client's scheduled GI session. Letters should be sent no more than 6 days in advance of a GI session to maximise attendance.
- The sending of an SMS reminder was found to have no statistically significant effect. However, the descriptive results suggest there is a case for a follow up ex-post evaluation.
- Preliminary cost-benefit analysis shows that the introduction of letter 3 could produce time savings of over ~660 person hours per year, if rolled out nationwide.
- **Based on the findings, it is recommended that the original invite letter is replaced with letter 3 as designed in Appendix F.**

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Appendices

Appendix A: Glossary

AST – Activation Service Team – The team in each Intreo office responsible for organising activation activities for jobseekers

DNA – Did not attend – When a jobseeker fails to attend a scheduled appointment without pre-notification

DPER – Department of Public Expenditure and Reform

DSP – Department of Social Protection

GIS – Group Information Sessions – Informational sessions held on a regular basis in Intreo offices informing jobseekers of the different services offered by Intreo offices.

JLD – Jobseeker Longitudinal Database – A dataset compiled by the DSP which includes an episodic account of each jobseeker's interactions with the Live Register that includes socio-demographic information

MV – Multi-variate – Where there are two or more variables

PEX – Probability of Exit – a numeric score derived from a questionnaire that profiles jobseekers in terms of their probability of exiting the Live Register into employment

RCT – Randomised Control Trial – An applied experimental method to test a treatment that incorporates randomisation to minimise bias

Appendix B: ANOVA Analysis

Table B.1: ANOVA Results, Full Sample

Response	Test	F Value	Pr > F
Attended	**Letter 1 vs 2**	747.68	<.0001
	Letter 1 vs 3	841.79	<.0001
	Letter 2 vs 3	824.91	<.0001
Cancelled	**Letter 1 vs 2**	174.32	<.0001
	Letter 1 vs 3	109.77	<.0001
	Letter 2 vs 3	136.5	<.0001
Did not attend	**Letter 1 vs 2**	414.96	<.0001
	Letter 1 vs 3	442.02	<.0001
	Letter 2 vs 3	335.95	<.0001
Rescheduled	**Letter 1 vs 2**	117.64	<.0001
	Letter 1 vs 3	77.51	<.0001
	Letter 2 vs 3	199.45	<.0001

Appendix C: Results by Office

Table C.1: Outcomes by Letter by Office, Full Sample (n=4,395)

		Letter 1	Letter 2	Letter 3			Letter 1	Letter 2	Letter 3
Balbriggan	**Attended**	53.50%	51.70%	63.80%	**Finglas**	**Attended**	56.00%	51.30%	53.40%
	Cancelled	3.50%	6.00%	2.00%		**Cancelled**	11.20%	10.30%	7.80%
	DNA	29.90%	22.50%	17.10%		**DNA**	26.70%	27.40%	29.30%
	Rescheduled	13.20%	19.90%	17.10%		**Rescheduled**	6.00%	11.10%	9.50%
Ballina	**Attended**	76.00%	57.70%	60.90%	**Galway**	**Attended**	61.10%	64.60%	64.60%
	Cancelled	4.00%	3.80%	4.30%		**Cancelled**	8.00%	9.60%	7.40%
	DNA	16.00%	26.90%	26.10%		**DNA**	28.60%	23.60%	25.70%
	Rescheduled	4.00%	11.50%	8.70%		**Rescheduled**	2.30%	2.20%	2.30%
Ballymun	**Attended**	47.40%	45.00%	51.40%	**Kilbarrack**	**Attended**	49.10%	59.30%	57.10%
	Cancelled	10.50%	25.00%	16.20%		**Cancelled**	10.70%	8.10%	8.90%
	DNA	42.10%	30.00%	32.40%		**DNA**	32.00%	20.90%	25.00%
	Rescheduled	0.00%	0.00%	0.00%		**Rescheduled**	8.30%	11.60%	8.90%
Castlebar	**Attended**	71.40%	61.10%	69.80%	**Loughrea**	**Attended**	46.40%	59.00%	64.90%
	Cancelled	0.00%	7.40%	0.00%		**Cancelled**	15.90%	14.10%	12.20%
	DNA	26.80%	25.90%	28.30%		**DNA**	34.80%	25.60%	21.60%
	Rescheduled	1.80%	5.60%	1.90%		**Rescheduled**	2.90%	1.30%	1.40%
Coolock	**Attended**	62.10%	57.70%	63.10%	**Swords**	**Attended**	47.10%	50.40%	43.80%
	Cancelled	4.30%	7.50%	6.20%		**Cancelled**	19.90%	16.50%	17.70%
	DNA	28.90%	27.20%	22.80%		**DNA**	22.10%	14.20%	24.60%
	Rescheduled	4.70%	7.50%	7.90%		**Rescheduled**	11.00%	18.90%	13.80%

Appendix D: Model Co-variates

Table D.1: Model Co-variates, MV Subsample (n=3,600)

Co-variate	Rationale	Levels
Age	Demographic profile	25-34 35-44 45-54 < 25 > 55
Nation	Demographic profile	Irish Non-Irish
Gender	Demographic profile	Male Female
Office	Sample disaggregated by office to account for local conditions	Balbriggan Ballina Ballymun Castlebar Coolock Finglas Galway Kilbarrack Loughrea Swords
LTU	Cumulative duration of unemployment as a proxy for labour market readiness	< 1 year > 1 year
Occ-Group	Previous occupation as a proxy for skills and employability	Administrative Other Occupations Personal/Protective Professional/ Management Routine/ Transport Sales Occupations Trades Unknown
Weekly Rate	Categorised into bands to account for influence of financial incentives	€0 < €100 < €188 €100 - €144 €144 - €188
Delay	Accounts the variation in the lag between letter issue and GIS	1 - 2 weeks 2 - 3 weeks < 1 week > 3 weeks
Family Type	Proxy for influence of family commitments on attendance	No ADA, no CDAs ADA and CDAs ADA only CDAs only

Table D.2 Sample Balance Post Randomisation

	Letter 1	Letter 2	Letter 3
LR_Profile			
No History	0.1%	0.1%	0.0%
< 1 Year	76.8%	77.2%	75.8%
1 - 5 years	20.2%	19.4%	20.5%
> 5 Year	3.0%	3.3%	3.8%
Weekly Rate			
€0	8.3%	9.3%	8.5%
< €100	20.8%	18.7%	17.7%
€100 - €144	11.3%	10.0%	11.4%
€144 - €188	34.8%	36.1%	36.7%
> €188	24.9%	26.0%	25.8%
Family_flag			
ADA and CDAs	6.2%	6.9%	7.5%
ADA only	2.1%	2.6%	2.8%
CDAs only	10.3%	9.6%	10.6%
No ADA, no CDAs	81.5%	80.9%	79.2%
Age			
< 25	43.0%	39.8%	39.2%
25-34	25.1%	27.2%	27.3%
35-44	19.2%	18.8%	17.1%
45-54	10.2%	10.8%	12.6%
> 55	2.6%	3.6%	3.8%
Gender			
M	54.9%	58.5%	55.3%
W	45.1%	41.5%	44.8%
Occup_grp			
Administrative	11.5%	11.4%	12.8%
Other Occupations	7.4%	8.1%	6.2%
Personal/Protective	12.3%	12.0%	11.0%
Professional/Management	17.2%	19.8%	20.3%
Routine/Transport	12.5%	12.4%	12.4%
Sales Occupations	15.6%	14.3%	14.6%
Trades	12.1%	10.7%	11.6%
Unknown	11.4%	11.3%	11.3%
Office			
Balbriggan	11.8%	12.3%	12.6%
Ballina	2.6%	2.1%	1.9%
Ballymun	6.3%	6.6%	6.2%
Castlebar	4.7%	4.4%	4.4%
Coolock	19.6%	19.6%	19.9%
Finglas	9.7%	9.6%	9.7%
Galway	14.4%	14.7%	14.4%
Kilbarrack	14.0%	13.9%	14.0%
Loughrea	5.7%	6.3%	6.2%
Swords	11.3%	10.6%	10.8%

Appendix E: Detailed Regression Results

E.1: Binary Logit Regression Results

Naïve Model I:

Analysis of Maximum Likelihood Estimates

Parameter	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	-0.1788	0.0526	11.5604	0.0007
Letter Version Sent 2	0.0383	0.0742	0.2672	0.6052
Letter Version Sent 3	-0.0954	0.0744	1.6417	0.2001

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
Letter Version Sent 2 vs 1	1.039	0.898	1.202
Letter Version Sent 3 vs 1	0.909	0.786	1.052

Naïve Model II:

Analysis of Maximum Likelihood Estimates

Parameter	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	0.2378	0.0581	16.7244	<.0001
Letter.Version.Sent2	0.00676	0.0822	0.0068	0.9345
Letter.Version.Sent3	0.1331	0.0826	2.5930	0.1073

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
Letter.Version.Sent 2 vs 1	1.007	0.857	1.183
Letter.Version.Sent 3 vs 1	1.142	0.972	1.343

MV Model:

Analysis of Maximum Likelihood Estimates

Parameter	Level	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Letter.Version.Sent	2	1	0.00270	0.0842	0.0010	0.9744
Letter.Version.Sent	3	1	0.1206	0.0848	2.0224	0.1550
Office.Name	Balbriggan	1	0.4170	0.1651	6.3827	0.0115
Office.Name	Ballina	1	1.1680	0.3705	9.9383	0.0016
Office.Name	Ballymun	1	-0.3170	0.4360	0.5288	0.4671
Office.Name	Castlebar	1	1.1070	0.4171	7.0457	0.0079
Office.Name	Coolock	1	0.6461	0.3609	3.2052	0.0734
Office.Name	Finglas	1	0.2933	0.2835	1.0704	0.3009
Office.Name	Galway	1	0.1885	0.4067	0.2148	0.6430
Office.Name	Kilbarrack	1	-0.2470	0.3593	0.4727	0.4917
Office.Name	Loughrea	1	0.5305	0.1794	8.7460	0.0031
Delay	1 - 2 weeks	1	-0.0135	0.1881	0.0052	0.9428
Delay	2 - 3 weeks	1	-0.0341	0.1977	0.0297	0.8632
Delay	< 1 week	1	0.1707	0.4369	0.1527	0.6960
Gender	M	1	0.0125	0.0768	0.0263	0.8711
LTU	0	1	-0.1663	0.0867	3.6817	0.0550
family_flag	ADA and CDAs	1	0.1701	0.1634	1.0843	0.2977
family_flag	ADA only	1	0.1016	0.2482	0.1677	0.6821
family_flag	CDAs only	1	-0.1426	0.1381	1.0668	0.3017
occup_grp	Administrative	1	0.1226	0.1879	0.4262	0.5139
occup_grp	Other Occupations	1	-0.1469	0.1981	0.5499	0.4583
occup_grp	Personal/Protective	1	0.0427	0.1852	0.0532	0.8175
occup_grp	Professional/Management	1	-0.0953	0.1804	0.2789	0.5974
occup_grp	Routine Process, Transport and Machinery Workers	1	0.0162	0.1823	0.0079	0.9293
occup_grp	Sales Occupations	1	0.0176	0.1771	0.0098	0.9210
occup_grp	Trades	1	-0.1670	0.1883	0.7863	0.3752
National	Irish	1	0.3652	0.2702	1.8266	0.1765
National	Non-Irish	1	0.4106	0.2791	2.1644	0.1412
age	25-34	1	-0.7475	0.2053	13.2607	0.0003
age	35-44	1	-0.6582	0.2120	9.6399	0.0019
age	45-54	1	-0.2090	0.2236	0.8739	0.3499
age	< 25	1	-1.1627	0.2089	30.9897	<.0001
Rate	0	1	0.1473	0.2015	0.5346	0.4647
Rate	< €100	1	0.1299	0.1204	1.1635	0.2807
Rate	< €188	1	0.1394	0.1095	1.6225	0.2027
Rate	€100 - €144	1	0.1058	0.1254	0.7111	0.3991

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
Letter.Version.Sent 2 vs 1	1.003	0.850	1.183
Letter.Version.Sent 3 vs 1	1.128	0.955	1.332
Office.Name Balbriggan vs Swords	1.517	1.098	2.097
Office.Name Ballina vs Swords	3.215	1.556	6.647
Office.Name Ballymun vs Swords	0.728	0.310	1.712
Office.Name Castlebar vs Swords	3.025	1.336	6.851
Office.Name Coolock vs Swords	1.908	0.941	3.871
Office.Name Finglas vs Swords	1.341	0.769	2.337
Office.Name Galway vs Swords	1.207	0.544	2.680
Office.Name Kilbarrack vs Swords	0.781	0.386	1.580
Office.Name Loughrea vs Swords	1.700	1.196	2.416
Delay 1 - 2 weeks vs > 3 weeks	0.987	0.682	1.426
Delay 2 - 3 weeks vs > 3 weeks	0.967	0.656	1.424
Delay < 1 week vs > 3 weeks	1.186	0.504	2.793
Gender M vs W	1.013	0.871	1.177
LTU 0 vs 1	0.847	0.715	1.004
family_flag ADA and CDAs vs No ADA, no CDAs	1.185	0.861	1.633
family_flag ADA only vs No ADA, no CDAs	1.107	0.681	1.801
family_flag CDAs only vs No ADA, no CDAs	0.867	0.661	1.137
occup_grp Administrative vs Unknown	1.130	0.782	1.634
occup_grp Other Occupations vs Unknown	0.863	0.585	1.273
occup_grp Personal/Protective vs Unknown	1.044	0.726	1.500
occup_grp Professional/Management vs Unknown	0.909	0.638	1.295
occup_grp Routine Process, Transport and Machinery Workers vs Unknown	1.016	0.711	1.453
occup_grp Sales Occupations vs Unknown	1.018	0.719	1.440
occup_grp Trades vs Unknown	0.846	0.585	1.224
National Irish vs Unknown	1.441	0.848	2.447
National Non-Irish vs Unknown	1.508	0.872	2.606
age 25-34 vs > 55	0.474	0.317	0.708
age 35-44 vs > 55	0.518	0.342	0.785
age 45-54 vs > 55	0.811	0.523	1.258
age < 25 vs > 55	0.313	0.208	0.471
Rate 0 vs €144 - €188	1.159	0.781	1.720
Rate < €100 vs €144 - €188	1.139	0.899	1.442
Rate < €188 vs €144 - €188	1.150	0.928	1.425
Rate €100 - €144 vs €144 - €188	1.112	0.869	1.421

E.2: Multinomial Logit Regression Results:

Naïve Model I:

Analysis of Maximum Likelihood Estimates

Parameter	Response	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	Cancelled	-1.7426	0.0919	359.2061	<.0001
Intercept	Did not attend	-0.6156	0.0599	105.5556	<.0001
Intercept	Rescheduled	-2.1124	0.1080	382.2723	<.0001
Letter Version Sent 2	Cancelled	0.1191	0.1272	0.8764	0.3492
Letter Version Sent 2	Did not attend	-0.1271	0.0868	2.1425	0.1433
Letter Version Sent 2	Rescheduled	0.4825	0.1394	11.9788	0.0005
Letter Version Sent 3	Cancelled	-0.1714	0.1334	1.6524	0.1986
Letter Version Sent 3	Did not attend	-0.1548	0.0859	3.2454	0.0716
Letter Version Sent 3	Rescheduled	0.2144	0.1445	2.2032	0.1377

Odds Ratio Estimates

Effect	Response	Point Estimate	95% Wald Confidence Limits	
Letter Version Sent 2 vs 1	Cancelled	1.126	0.878	1.445
Letter Version Sent 2 vs 1	Did not attend	0.881	0.743	1.044
Letter Version Sent 2 vs 1	Rescheduled	1.620	1.233	2.129
Letter Version Sent 3 vs 1	Cancelled	0.842	0.649	1.094
Letter Version Sent 3 vs 1	Did not attend	0.857	0.724	1.014
Letter Version Sent 3 vs 1	Rescheduled	1.239	0.934	1.645

Naïve Model II:

Analysis of Maximum Likelihood Estimates

Parameter	Response	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	Cancelled	-1.8453	0.1045	311.7091	<.0001
Intercept	Did not attend	-0.6566	0.0661	98.7827	<.0001
Intercept	Rescheduled	-2.1910	0.1217	323.9169	<.0001
Letter.Version.Sent2	Cancelled	0.1619	0.1429	1.2844	0.2571
Letter.Version.Sent2	Did not attend	-0.1888	0.0965	3.8268	0.0504
Letter.Version.Sent2	Rescheduled	0.4068	0.1586	6.5774	0.0103
Letter.Version.Sent3	Cancelled	-0.1248	0.1498	0.6943	0.4047
Letter.Version.Sent3	Did not attend	-0.2251	0.0958	5.5242	0.0188
Letter.Version.Sent3	Rescheduled	0.2005	0.1629	1.5147	0.2184

Odds Ratio Estimates

Effect	Response	Point Estimate	95% Wald Confidence Limits	
Letter.Version.Sent 2 vs 1	Cancelled	1.176	0.889	1.556
Letter.Version.Sent 2 vs 1	Did not attend	0.828	0.685	1.000
Letter.Version.Sent 2 vs 1	Rescheduled	1.502	1.101	2.050
Letter.Version.Sent 3 vs 1	Cancelled	0.883	0.658	1.184
Letter.Version.Sent 3 vs 1	Did not attend	0.798	0.662	0.963
Letter.Version.Sent 3 vs 1	Rescheduled	1.222	0.888	1.682

MV Model:

Analysis of Maximum Likelihood Estimates

Parameter	Level	Response	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		Cancelled	-2.0343	0.6817	8.9054	0.0028
Intercept		Did not attend	-2.2632	0.5324	18.0690	<.0001
Intercept		Rescheduled	-3.9335	0.8827	19.8566	<.0001
Letter.Version.Sent	2	Cancelled	0.2001	0.1474	1.8432	0.1746
Letter.Version.Sent	2	Did not attend	-0.1865	0.0995	3.5102	0.0610
Letter.Version.Sent	2	Rescheduled	0.4567	0.1639	7.7593	0.0053
Letter.Version.Sent	3	Cancelled	-0.0924	0.1541	0.3595	0.5488
Letter.Version.Sent	3	Did not attend	-0.1900	0.0989	3.6910	0.0547
Letter.Version.Sent	3	Rescheduled	0.2240	0.1682	1.7730	0.1830
Office.Name	Balbriggan	Cancelled	-1.4641	0.3042	23.1700	<.0001
Office.Name	Balbriggan	Did not attend	-0.0820	0.1931	0.1802	0.6712
Office.Name	Balbriggan	Rescheduled	-0.1949	0.2186	0.7946	0.3727
Office.Name	Ballina	Cancelled	-1.8370	0.6271	8.5803	0.0034
Office.Name	Ballina	Did not attend	-0.4680	0.3254	2.0691	0.1503
Office.Name	Ballina	Rescheduled	-0.6387	0.4292	2.2148	0.1367
Office.Name	Ballymun	Cancelled	0.2455	0.2561	0.9188	0.3378
Office.Name	Ballymun	Did not attend	0.3473	0.2122	2.6786	0.1017
Office.Name	Ballymun	Rescheduled	-14.8377	268.2	0.0031	0.9559
Office.Name	Castlebar	Cancelled	-2.2544	0.5401	17.4200	<.0001
Office.Name	Castlebar	Did not attend	-0.0787	0.2353	0.1117	0.7382
Office.Name	Castlebar	Rescheduled	-2.0286	0.4901	17.1330	<.0001
Office.Name	Coolock	Cancelled	-1.4637	0.2573	32.3672	<.0001
Office.Name	Coolock	Did not attend	-0.0771	0.1790	0.1857	0.6665
Office.Name	Coolock	Rescheduled	-1.1395	0.2476	21.1822	<.0001
Office.Name	Finglas	Cancelled	-1.0048	0.2840	12.5221	0.0004
Office.Name	Finglas	Did not attend	0.0776	0.2116	0.1345	0.7138
Office.Name	Finglas	Rescheduled	-0.5479	0.3029	3.2721	0.0705
Office.Name	Galway	Cancelled	-1.4613	0.2707	29.1327	<.0001
Office.Name	Galway	Did not attend	-0.0604	0.1971	0.0938	0.7594
Office.Name	Galway	Rescheduled	-2.1119	0.3721	32.2039	<.0001
Office.Name	Kilbarrack	Cancelled	-0.7173	0.2319	9.5685	0.0020
Office.Name	Kilbarrack	Did not attend	0.0668	0.1816	0.1354	0.7129
Office.Name	Kilbarrack	Rescheduled	-0.6951	0.2286	9.2484	0.0024
Office.Name	Loughrea	Cancelled	-0.3084	0.2664	1.3395	0.2471
Office.Name	Loughrea	Did not attend	-0.0143	0.2184	0.0043	0.9479
Office.Name	Loughrea	Rescheduled	-2.5042	0.5359	21.8336	<.0001

Analysis of Maximum Likelihood Estimates

Parameter	Level	Response	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Delay	1 - 2 weeks	Cancelled	-0.7603	0.2605	8.5169	0.0035
Delay	1 - 2 weeks	Did not attend	0.4536	0.2678	2.8691	0.0903
Delay	1 - 2 weeks	Rescheduled	1.3301	0.4875	7.4445	0.0064
Delay	2 - 3 weeks	Cancelled	-0.1964	0.2845	0.4766	0.4900
Delay	2 - 3 weeks	Did not attend	0.4395	0.2684	2.6818	0.1015
Delay	2 - 3 weeks	Rescheduled	1.1169	0.5067	4.8584	0.0275
Delay	< 1 week	Cancelled	-14.2119	664.1	0.0005	0.9829
Delay	< 1 week	Did not attend	0.5290	0.5381	0.9665	0.3255
Delay	< 1 week	Rescheduled	0.9410	0.7186	1.7148	0.1904
Gender	M	Cancelled	-0.2265	0.1361	2.7711	0.0960
Gender	M	Did not attend	0.2778	0.0937	8.7987	0.0030
Gender	M	Rescheduled	-0.3889	0.1452	7.1715	0.0074
LTU	0	Cancelled	0.4704	0.1666	7.9758	0.0047
LTU	0	Did not attend	0.1335	0.1017	1.7224	0.1894
LTU	0	Rescheduled	0.1738	0.1670	1.0833	0.2980
family_flag	ADA and CDAs	Cancelled	0.0211	0.2814	0.0056	0.9402
family_flag	ADA and CDAs	Did not attend	-0.3952	0.2114	3.4931	0.0616
family_flag	ADA and CDAs	Rescheduled	0.1440	0.2780	0.2683	0.6045
family_flag	ADA only	Cancelled	0.3499	0.4081	0.7351	0.3912
family_flag	ADA only	Did not attend	-0.4109	0.3309	1.5419	0.2143
family_flag	ADA only	Rescheduled	0.2084	0.4262	0.2391	0.6249
family_flag	CDAs only	Cancelled	0.0899	0.2452	0.1345	0.7138
family_flag	CDAs only	Did not attend	0.2994	0.1642	3.3254	0.0682
family_flag	CDAs only	Rescheduled	-0.1160	0.2599	0.1992	0.6553
occup_grp	Administrative	Cancelled	0.9408	0.4168	5.0954	0.0240
occup_grp	Administrative	Did not attend	-0.3969	0.2265	3.0707	0.0797
occup_grp	Administrative	Rescheduled	-0.3416	0.3237	1.1137	0.2913
occup_grp	Other Occupations	Cancelled	0.4240	0.4658	0.8286	0.3627
occup_grp	Other Occupations	Did not attend	0.3050	0.2214	1.8982	0.1683
occup_grp	Other Occupations	Rescheduled	-0.4079	0.3581	1.2977	0.2546
occup_grp	Personal/Protective	Cancelled	0.6831	0.4198	2.6483	0.1037
occup_grp	Personal/Protective	Did not attend	0.0378	0.2116	0.0319	0.8583
occup_grp	Personal/Protective	Rescheduled	-0.5646	0.3368	2.8098	0.0937
occup_grp	Professional/Management	Cancelled	0.8048	0.4126	3.8049	0.0511
occup_grp	Professional/Management	Did not attend	0.0914	0.2068	0.1953	0.6585
occup_grp	Professional/Management	Rescheduled	-0.2767	0.3183	0.7557	0.3847
occup_grp	Routine Process, Transport and Machinery Workers	Cancelled	0.5185	0.4218	1.5108	0.2190
occup_grp	Routine Process, Transport and Machinery Workers	Did not attend	0.0887	0.2047	0.1875	0.6650

Analysis of Maximum Likelihood Estimates

Parameter	Level	Response	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
occup_grp	Routine Process, Transport and Machinery Workers	Rescheduled	-0.5748	0.3408	2.8444	0.0917
occup_grp	Sales Occupations	Cancelled	0.6072	0.4138	2.1527	0.1423
occup_grp	Sales Occupations	Did not attend	0.0963	0.1996	0.2327	0.6296
occup_grp	Sales Occupations	Rescheduled	-0.6194	0.3204	3.7367	0.0532
occup_grp	Trades	Cancelled	0.8678	0.4293	4.0868	0.0432
occup_grp	Trades	Did not attend	0.2520	0.2116	1.4179	0.2337
occup_grp	Trades	Rescheduled	-0.5680	0.3548	2.5637	0.1093
National	Irish	Cancelled	-0.2187	0.5783	0.1430	0.7053
National	Irish	Did not attend	-0.1955	0.3506	0.3110	0.5771
National	Irish	Rescheduled	0.7530	0.5623	1.7930	0.1806
National	Non-Irish	Cancelled	-0.2646	0.5893	0.2016	0.6535
National	Non-Irish	Did not attend	-0.2560	0.3597	0.5064	0.4767
National	Non-Irish	Rescheduled	0.7568	0.5771	1.7196	0.1897
age	25-34	Cancelled	0.9157	0.4005	5.2275	0.0222
age	25-34	Did not attend	0.9766	0.3049	10.2604	0.0014
age	25-34	Rescheduled	1.1372	0.4906	5.3740	0.0204
age	35-44	Cancelled	0.8825	0.4054	4.7379	0.0295
age	35-44	Did not attend	0.7049	0.3122	5.0985	0.0239
age	35-44	Rescheduled	1.3479	0.4910	7.5352	0.0061
age	45-54	Cancelled	0.3090	0.4290	0.5188	0.4713
age	45-54	Did not attend	0.4394	0.3235	1.8446	0.1744
age	45-54	Rescheduled	0.7002	0.5129	1.8638	0.1722
age	< 25	Cancelled	0.9784	0.4119	5.6426	0.0175
age	< 25	Did not attend	1.5266	0.3081	24.5522	<.0001
age	< 25	Rescheduled	1.5925	0.4967	10.2808	0.0013
Rate	0	Cancelled	0.3179	0.3365	0.8925	0.3448
Rate	0	Did not attend	0.0196	0.2709	0.0052	0.9423
Rate	0	Rescheduled	0.0796	0.3928	0.0411	0.8393
Rate	< €100	Cancelled	-0.0510	0.2204	0.0535	0.8170
Rate	< €100	Did not attend	-0.0759	0.1371	0.3065	0.5799
Rate	< €100	Rescheduled	-0.7039	0.2429	8.3987	0.0038
Rate	< €188	Cancelled	-0.1553	0.1951	0.6340	0.4259
Rate	< €188	Did not attend	-0.0965	0.1304	0.5480	0.4591
Rate	< €188	Rescheduled	-0.1781	0.2042	0.7606	0.3831
Rate	€100 - €144	Cancelled	0.2676	0.2076	1.6608	0.1975
Rate	€100 - €144	Did not attend	-0.3012	0.1535	3.8501	0.0497
Rate	€100 - €144	Rescheduled	-0.0276	0.2231	0.0153	0.9016

Odds Ratio Estimates

Effect	Response	Point Estimate	95% Wald Confidence Limits	
Letter.Version.Sent 2 vs 1	Cancelled	1.222	0.915	1.631
Letter.Version.Sent 2 vs 1	Did not attend	0.830	0.683	1.009
Letter.Version.Sent 2 vs 1	Rescheduled	1.579	1.145	2.177
Letter.Version.Sent 3 vs 1	Cancelled	0.912	0.674	1.233
Letter.Version.Sent 3 vs 1	Did not attend	0.827	0.681	1.004
Letter.Version.Sent 3 vs 1	Rescheduled	1.251	0.900	1.740
Office.Name Balbriggan vs Swords	Cancelled	0.231	0.127	0.420
Office.Name Balbriggan vs Swords	Did not attend	0.921	0.631	1.345
Office.Name Balbriggan vs Swords	Rescheduled	0.823	0.536	1.263
Office.Name Ballina vs Swords	Cancelled	0.159	0.047	0.545
Office.Name Ballina vs Swords	Did not attend	0.626	0.331	1.185
Office.Name Ballina vs Swords	Rescheduled	0.528	0.228	1.224
Office.Name Ballymun vs Swords	Cancelled	1.278	0.774	2.111
Office.Name Ballymun vs Swords	Did not attend	1.415	0.934	2.145
Office.Name Ballymun vs Swords	Rescheduled	<0.001	<0.001	>999.999
Office.Name Castlebar vs Swords	Cancelled	0.105	0.036	0.302
Office.Name Castlebar vs Swords	Did not attend	0.924	0.583	1.466
Office.Name Castlebar vs Swords	Rescheduled	0.132	0.050	0.344
Office.Name Coolock vs Swords	Cancelled	0.231	0.140	0.383
Office.Name Coolock vs Swords	Did not attend	0.926	0.652	1.315
Office.Name Coolock vs Swords	Rescheduled	0.320	0.197	0.520
Office.Name Finglas vs Swords	Cancelled	0.366	0.210	0.639
Office.Name Finglas vs Swords	Did not attend	1.081	0.714	1.636
Office.Name Finglas vs Swords	Rescheduled	0.578	0.319	1.047
Office.Name Galway vs Swords	Cancelled	0.232	0.136	0.394
Office.Name Galway vs Swords	Did not attend	0.941	0.640	1.385
Office.Name Galway vs Swords	Rescheduled	0.121	0.058	0.251
Office.Name Kilbarrack vs Swords	Cancelled	0.488	0.310	0.769
Office.Name Kilbarrack vs Swords	Did not attend	1.069	0.749	1.526
Office.Name Kilbarrack vs Swords	Rescheduled	0.499	0.319	0.781
Office.Name Loughrea vs Swords	Cancelled	0.735	0.436	1.238
Office.Name Loughrea vs Swords	Did not attend	0.986	0.643	1.513
Office.Name Loughrea vs Swords	Rescheduled	0.082	0.029	0.234
Delay 1 - 2 weeks vs > 3 weeks	Cancelled	0.468	0.281	0.779
Delay 1 - 2 weeks vs > 3 weeks	Did not attend	1.574	0.931	2.660
Delay 1 - 2 weeks vs > 3 weeks	Rescheduled	3.781	1.454	9.831

Odds Ratio Estimates

Effect	Response	Point Estimate	95% Wald Confidence Limits	
Delay 2 - 3 weeks vs > 3 weeks	Cancelled	0.822	0.470	1.435
Delay 2 - 3 weeks vs > 3 weeks	Did not attend	1.552	0.917	2.626
Delay 2 - 3 weeks vs > 3 weeks	Rescheduled	3.055	1.132	8.248
Delay < 1 week vs > 3 weeks	Cancelled	<0.001	<0.001	>999.999
Delay < 1 week vs > 3 weeks	Did not attend	1.697	0.591	4.872
Delay < 1 week vs > 3 weeks	Rescheduled	2.562	0.627	10.479
Gender M vs W	Cancelled	0.797	0.611	1.041
Gender M vs W	Did not attend	1.320	1.099	1.586
Gender M vs W	Rescheduled	0.678	0.510	0.901
LTU 0 vs 1	Cancelled	1.601	1.155	2.219
LTU 0 vs 1	Did not attend	1.143	0.936	1.395
LTU 0 vs 1	Rescheduled	1.190	0.858	1.650
family_flag ADA and CDAs vs No ADA, no CDAs	Cancelled	1.021	0.588	1.773
family_flag ADA and CDAs vs No ADA, no CDAs	Did not attend	0.674	0.445	1.019
family_flag ADA and CDAs vs No ADA, no CDAs	Rescheduled	1.155	0.670	1.991
family_flag ADA only vs No ADA, no CDAs	Cancelled	1.419	0.638	3.157
family_flag ADA only vs No ADA, no CDAs	Did not attend	0.663	0.347	1.268
family_flag ADA only vs No ADA, no CDAs	Rescheduled	1.232	0.534	2.840
family_flag CDAs only vs No ADA, no CDAs	Cancelled	1.094	0.677	1.769
family_flag CDAs only vs No ADA, no CDAs	Did not attend	1.349	0.978	1.861
family_flag CDAs only vs No ADA, no CDAs	Rescheduled	0.890	0.535	1.482
occup_grp Administrative vs Unknown	Cancelled	2.562	1.132	5.799
occup_grp Administrative vs Unknown	Did not attend	0.672	0.431	1.048
occup_grp Administrative vs Unknown	Rescheduled	0.711	0.377	1.340
occup_grp Other Occupations vs Unknown	Cancelled	1.528	0.613	3.807
occup_grp Other Occupations vs Unknown	Did not attend	1.357	0.879	2.094
occup_grp Other Occupations vs Unknown	Rescheduled	0.665	0.330	1.342
occup_grp Personal/Protective vs Unknown	Cancelled	1.980	0.870	4.508
occup_grp Personal/Protective vs Unknown	Did not attend	1.039	0.686	1.572
occup_grp Personal/Protective vs Unknown	Rescheduled	0.569	0.294	1.100
occup_grp Professional/Management vs Unknown	Cancelled	2.236	0.996	5.021
occup_grp Professional/Management vs Unknown	Did not attend	1.096	0.731	1.643
occup_grp Professional/Management vs Unknown	Rescheduled	0.758	0.406	1.415
occup_grp Routine Process, Transport and Machinery Workers vs Unknown	Cancelled	1.679	0.735	3.839
occup_grp Routine Process, Transport and Machinery Workers vs Unknown	Did not attend	1.093	0.732	1.632
occup_grp Routine Process, Transport and Machinery Workers vs Unknown	Rescheduled	0.563	0.289	1.098
occup_grp Sales Occupations vs Unknown	Cancelled	1.835	0.816	4.130
occup_grp Sales Occupations vs Unknown	Did not attend	1.101	0.745	1.628

Odds Ratio Estimates

Effect	Response	Point Estimate	95% Wald Confidence Limits	
occup_grp Sales Occupations vs Unknown	Rescheduled	0.538	0.287	1.009
occup_grp Trades vs Unknown	Cancelled	2.382	1.027	5.524
occup_grp Trades vs Unknown	Did not attend	1.287	0.850	1.948
occup_grp Trades vs Unknown	Rescheduled	0.567	0.283	1.136
National Irish vs Unknown	Cancelled	0.804	0.259	2.496
National Irish vs Unknown	Did not attend	0.822	0.414	1.635
National Irish vs Unknown	Rescheduled	2.123	0.705	6.392
National Non-Irish vs Unknown	Cancelled	0.768	0.242	2.436
National Non-Irish vs Unknown	Did not attend	0.774	0.383	1.567
National Non-Irish vs Unknown	Rescheduled	2.131	0.688	6.605
age 25-34 vs > 55	Cancelled	2.498	1.140	5.477
age 25-34 vs > 55	Did not attend	2.655	1.461	4.826
age 25-34 vs > 55	Rescheduled	3.118	1.192	8.155
age 35-44 vs > 55	Cancelled	2.417	1.092	5.350
age 35-44 vs > 55	Did not attend	2.024	1.097	3.731
age 35-44 vs > 55	Rescheduled	3.849	1.470	10.077
age 45-54 vs > 55	Cancelled	1.362	0.588	3.157
age 45-54 vs > 55	Did not attend	1.552	0.823	2.925
age 45-54 vs > 55	Rescheduled	2.014	0.737	5.504
age < 25 vs > 55	Cancelled	2.660	1.187	5.963
age < 25 vs > 55	Did not attend	4.603	2.516	8.419
age < 25 vs > 55	Rescheduled	4.916	1.857	13.013
Rate 0 vs €144 - €188	Cancelled	1.374	0.711	2.658
Rate 0 vs €144 - €188	Did not attend	1.020	0.600	1.734
Rate 0 vs €144 - €188	Rescheduled	1.083	0.501	2.339
Rate < €100 vs €144 - €188	Cancelled	0.950	0.617	1.464
Rate < €100 vs €144 - €188	Did not attend	0.927	0.708	1.213
Rate < €100 vs €144 - €188	Rescheduled	0.495	0.307	0.796
Rate < €188 vs €144 - €188	Cancelled	0.856	0.584	1.255
Rate < €188 vs €144 - €188	Did not attend	0.908	0.703	1.172
Rate < €188 vs €144 - €188	Rescheduled	0.837	0.561	1.249
Rate €100 - €144 vs €144 - €188	Cancelled	1.307	0.870	1.963
Rate €100 - €144 vs €144 - €188	Did not attend	0.740	0.548	1.000
Rate €100 - €144 vs €144 - €188	Rescheduled	0.973	0.628	1.506

Appendix F: Letter Designs

Letter Type 1 – Standard DSP Letter

Department of Social Protection
www.welfare.ie

<<Intreo Office Address Line 1>>
<<Intreo Office Address Line 2>>
<<Intreo Office Address Line 3>>
<<Intreo Office Address Line 4>>
<<Intreo Office County Name >>
< Intreo Office Eircode>>

Guthán/Telephone <<phone number>>

<<Irish Address Line 1>>
<<Irish Address Line 2>>
<<Irish Address Line 3>>
<<Irish Address Line 4>>
<<County Name>>
<<Eircode>>

<<First Name>> <Second Name>>
<<Client Address Line 1>>
<<Client Address Line 2>>
<<Client Address Line 3>>
<<Client County>>

Date: <<Sent date>>

PPSN: <<PPSN>>

NOTIFICATION TO ATTEND GROUP INFORMATION SESSION

Dear Mr/Mrs. <<Surname>>,

The Department of Social Protection helps jobseekers to secure work by providing employment advice, assisting in job search and providing access to work experience and further education and training opportunities.

We are pleased to invite you to avail of these services and in particular to invite you to attend an information session along with other jobseekers at the following date and time:

Date: <<Appointment date>>

Start Time: **<<Start time>>** **End Time: <<End time>>**

Location: <<Location of appointment>>

The purpose of this meeting is to give you some details of the range of supports available to you, including employment, work experience, education, training and development opportunities, and to give you the chance to ask questions about the options available.

Following this meeting, you may also be invited to attend an individual meeting with a Case Officer, to review your particular employment objectives, to assess your education, training, or development needs and agree a Personal Progression Plan. This Plan will set out the steps you can take, with our support, to advance your progress to work.

People in receipt of jobseekers payments from the Department of Social Protection are expected to work with the Department and to take-up any offers of support including offers of group and individual meetings and any subsequent offers of training, education and development opportunities.

Intreo

Department of Social Protection
www.welfare.ie

<<Intreo Office Address Line 1>>
<<Intreo Office Address Line 2>>
<<Intreo Office Address Line 3>>
<<Intreo Office Address Line 4>>
<<Intreo Office County Name >>
< Intreo Office Eircode>>

Guthán/Telephone <<phone number>>

<<Irish Address Line 1>>
<<Irish Address Line 2>>
<<Irish Address Line 3>>
<<Irish Address Line 4>>
<<County Name>>
<<Eircode>>

Accordingly any refusal or failure without good cause, to take up such offers will result in your jobseeker payment being reduced.

If you feel it will not be possible to attend, you must contact the office above as soon as possible to see if an alternative can date can be arranged.

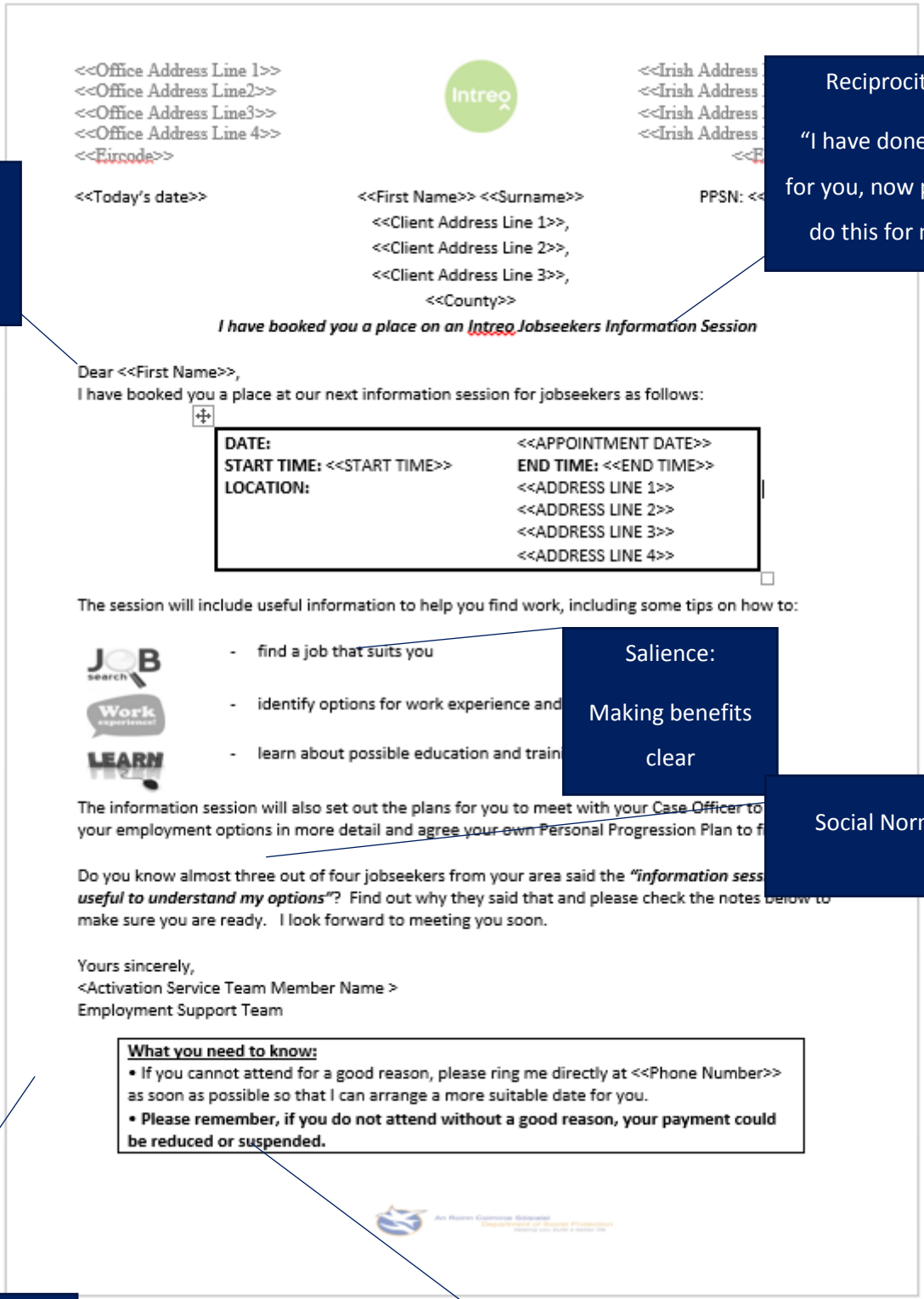
We look forward to seeing you at the information session.

Yours Sincerely,

<<Activation Service Team Member Name>>

Employment Support Team

Letter Type 2 – Behavioural Letter without Observer Effect



<<Office Address Line 1>>
<<Office Address Line2>>
<<Office Address Line3>>
<<Office Address Line 4>>
<<Eircode>>

<<Irish Address
<<Irish Address
<<Irish Address
<<Irish Address

<<Today's date>>

<<First Name>> <<Surname>>
<<Client Address Line 1>>,
<<Client Address Line 2>>,
<<Client Address Line 3>>,
<<County>>

PPSN: <<

I have booked you a place on an Intreo Jobseekers Information Session

Dear <<First Name>>,
I have booked you a place at our next information session for jobseekers as follows:

DATE:	<<APPOINTMENT DATE>>
START TIME: <<START TIME>>	**END TIME:** <<END TIME>>
LOCATION:	<<ADDRESS LINE 1>>
	<<ADDRESS LINE 2>>
	<<ADDRESS LINE 3>>
	<<ADDRESS LINE 4>>

The session will include useful information to help you find work, including some tips on how to:

- find a job that suits you
- identify options for work experience and
- learn about possible education and train

The information session will also set out the plans for you to meet with your Case Officer to your employment options in more detail and agree your own Personal Progression Plan to f

Do you know almost three out of four jobseekers from your area said the ***"information sess useful to understand my options"***? Find out why they said that and please check the notes below to make sure you are ready. I look forward to meeting you soon.

Yours sincerely,
<Activation Service Team Member Name >
Employment Support Team

What you need to know:
• If you cannot attend for a good reason, please ring me directly at <<Phone Number>> as soon as possible so that I can arrange a more suitable date for you.
• **Please remember, if you do not attend without a good reason, your payment could be reduced or suspended.**

Personalisation:

Use of first name personalises the

Reciprocity:

"I have done this for you, now please do this for me"

Salience +

Simplification

Improving readability.

Salience:

Making benefits clear

Social Norms

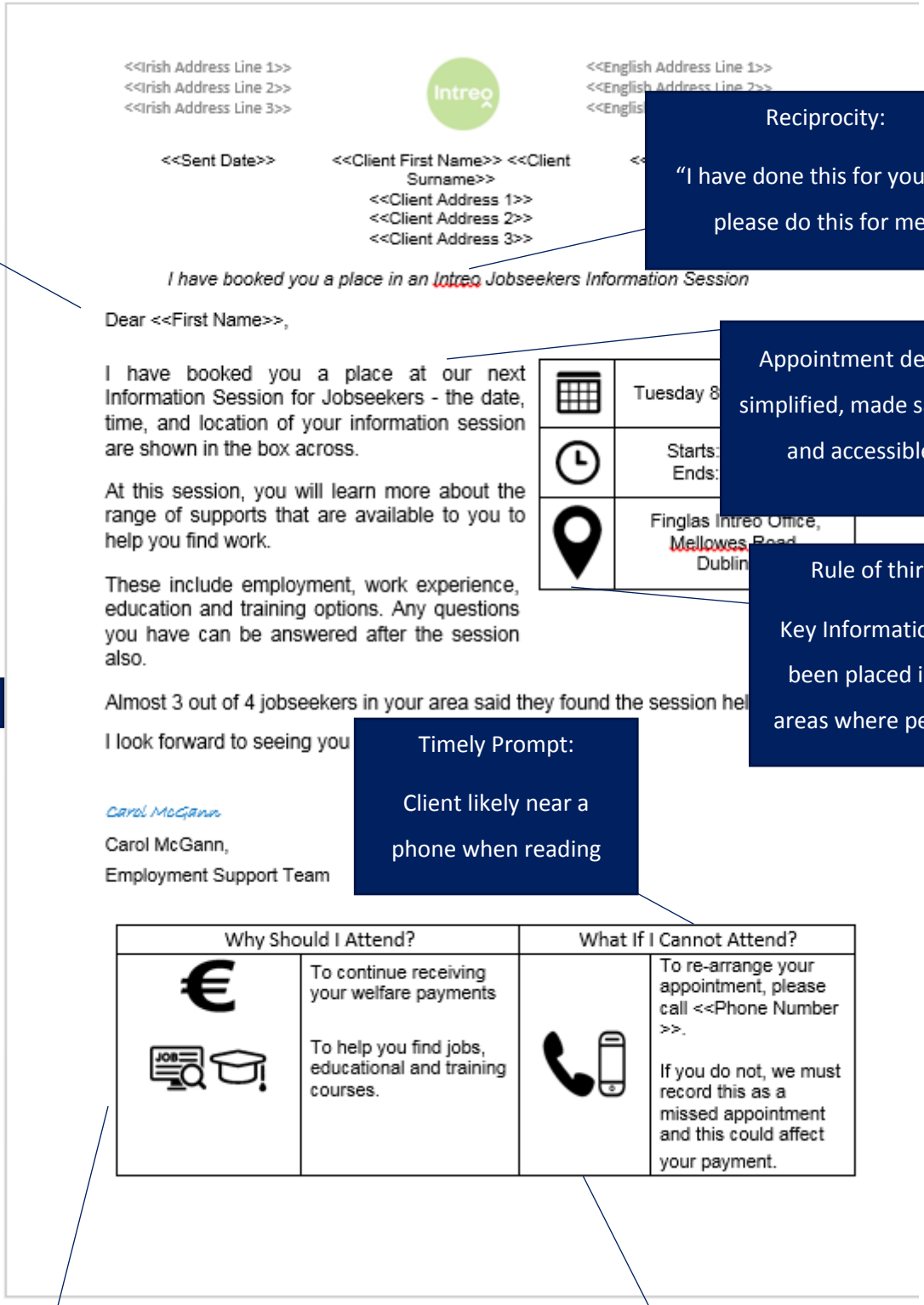
Timely Prompt:

Client likely near a phone when reading

Salience:

Making consequences

Letter Type 3 – Behavioural Letter with Observer Effect



<<Irish Address Line 1>>
<<Irish Address Line 2>>
<<Irish Address Line 3>>

Intreo

<<English Address Line 1>>
<<English Address Line 2>>
<<English

<<Sent Date>>

<<Client First Name>> <<Client Surname>>
<<Client Address 1>>
<<Client Address 2>>
<<Client Address 3>>

I have booked you a place in an Intreo Jobseekers Information Session

Dear <<First Name>>,

I have booked you a place at our next Information Session for Jobseekers - the date, time, and location of your information session are shown in the box across.

	Tuesday 8
	Starts: Ends:
	Finglas Intreo Office, Mellowes Road Dublin

At this session, you will learn more about the range of supports that are available to you to help you find work.

These include employment, work experience, education and training options. Any questions you have can be answered after the session also.

Almost 3 out of 4 jobseekers in your area said they found the session hel

I look forward to seeing you

Carol McGann

Carol McGann,
Employment Support Team

Why Should I Attend?		What If I Cannot Attend?	
€	To continue receiving your welfare payments		To re-arrange your appointment, please call <<Phone Number >>.
JOB	To help you find jobs, educational and training courses.		If you do not, we must record this as a missed appointment and this could affect your payment.

Personalisation: Use of 1st name personalises

Reciprocity:

"I have done this for you, now please do this for me"

Appointment details simplified, made salient, and accessible.

Rule of thirds:

Key Information has been placed in the areas where people's

Social Norm

Timely Prompt:

Client likely near a phone when reading

Salience and Accessibility:

The Key benefits of attending have been outlined clearly and are easier to read for those with lower levels of literacy.

Observer Effect:

The BIT in the UK found this message to be most effective in reducing "did-not-attends" at the hospitals they studied.