ESRI

Working Paper No. 664

May 2020

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Acknowledgements: We thank the Behavioural Change Subgroup of the National Public Health Emergency Team (NPHET) for support, and various of its members for useful guidance and comments. We are also grateful to attendees at an ESRI webinar for feedback.

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Abstract

Self-isolation is a vital element of efforts to contain COVID-19. We report an online experiment with a nationally representative sample (N=500) that tested behaviourally informed decision aids to support self-isolation. The experiment had three stages that tested interventions designed to help individuals to: (i) decide whether they need to self-isolate; (ii) be confident in their ability to self-isolate should they need to; and (iii) manage a household in which an individual needs to self-isolate. Relative to prevailing public health advice, displaying decision trees improved participants' decisions about when self-isolation was necessary, although they systematically underestimated the need to self-isolate in the presence of less common COVID-19 symptoms (e.g. sore throat, fatigue). Interaction with an online planning tool increased confidence about coping with self-isolation among adults aged under 40. Presenting advice in the form of infographics improved recall and comprehension of how to manage self-isolation. The study demonstrates how public health policy can benefit from behavioural pre-testing of interventions.

Introduction

Self-isolation is an established public health measure for combatting infectious disease (Day et al., 2006) and forms an essential aspect of the preparedness, readiness and response actions to COVID-19 recommended by the World Health Organisation (WHO, 2020a). The logic is simple: if individuals with reason to believe they might have the coronavirus avoid all contact with others, further spread of the disease is less likely. Self-isolation is important not only for slowing the initial spread of COVID-19, but also as countries ease social distancing measures while trying to keep infection under control.

Although the logic of self-isolation as a public health measure is straightforward, the behavioural science surrounding self-isolation is less so. This paper focuses on three specific behavioural elements. The first is the initial decision to undertake self-isolation. Individuals must accurately assess a situation against relevant public health guidelines and reach the appropriate conclusion about the need to self-isolate. The second is coping with the negative psychological consequences of self-isolation, which can be challenging (Brooks et al., 2020). These first two factors potentially interact. Individuals who feel unable to cope with self-isolation may be less inclined to self-isolate in marginal cases (e.g. when unsure of the strength of symptoms). Lastly, self-isolation requires household management. To reduce the risk of transmission, households containing a self-isolating individual need to follow guidance in relation to sleeping arrangements, bathrooms, eating, waste management, and so on.

The present study was motivated by a belief that techniques from behavioural science might be helpful for these three elements of self-isolation in the context of COVID-19. We used an online experiment to test whether three specific decision aids help people to make compliant decisions on whether to self-isolate, to be more confident about the prospect of self-isolation,

and to understand the requirements for managing a household in which an individual must self-isolate. The study was commissioned by the Behavioural Change Subgroup of the National Public Health Emergency Team in Ireland and was undertaken using a nationally representative sample.

Background and Hypotheses

The experiment was undertaken during the first week of April 2020. Everyone in Ireland had been urged to stay at home, except for a few specified reasons, including essential work, caring for others, essential shopping, and exercise. Public health guidelines stated that anyone experiencing symptoms of COVID-19 should self-isolate completely, while anyone who had been in close contact with a confirmed case of COVID-19, or who was living with someone displaying symptoms, should restrict their movements more than stated in the general guidance, by remaining at home as much as possible and leaving only to exercise or shop for essentials if absolutely necessary. These guidelines were covered extensively in the media and promoted via multiple government communication channels, including a bright yellow booklet (hereafter, the "booklet") sent by post to every household in the country.

The Decision to Self-Isolate

The symptoms of COVID-19 are listed in the booklet in a table (Appendix C, control condition), which explicitly contrasts them with the symptoms of common colds and flu. Thus, deciding when to self-isolate requires individuals to consider and weigh up multiple factors, over and above judgements about the presence or absence of specific symptoms. Previous research has shown that when multiple factors are in play, heuristic tools can be helpful for promoting good decision-making (Gigerenzer & Gaissmaier, 2011). These include "fast-and-frugal trees": a type of simple decision tree with n sequential questions and $n+1$

exits; one at each question and two at the final question (Martignon et al., 2003). Fast-and-frugal trees aim to represent decisions in a more intuitive and memorable way. They lend themselves to graphical representations, such as flowcharts, which can be beneficial for learning and comprehension relative to text-based explanations (Mayer, 2002; Butcher, 2006; McCrudden et al., 2007). Fast-and-frugal trees have been used successfully in multiple settings, including emergency medicine (Green & Mehr, 1997).

In common with circumstances in which fast-and-frugal trees are effective, the decision to self-isolate may impose a significant cognitive load, given the dispersal of guidance across sources, the volume of information, and the potential for ambiguity (e.g. what constitutes a symptom of COVID-19 or a "close contact"). We therefore hypothesised that fast-and-frugal trees might be a useful decision aids for people deciding whether they need to self-isolate or restrict their movements.

Coping with Self-Isolation

While anticipation of negative psychological effects may deter people from self-isolating, feeling well-prepared could assist (Lunn et al., 2020). Planning can help people to cope with changes in lifestyle and facilitate better compliance with health guidance (Sniehotta, 2009). Planning for the practicalities of self-isolation, such as planning for how essential supplies would be procured, could familiarise individuals with self-isolation and overcome some anxiety through "mere exposure" to the process (Lee, 2001). Plans can be made more effective by linking a conditional antecedent (e.g. "If I need to self-isolate…") to a specific intention (e.g. "I will ask my neighbour to pick up supplies and leave them at my door"). Such "implementation intentions" can bridge the intention-action gap in a range of domains, including health (Gollwitzer, 1999; Hagger & Luszczynska, 2014). Hence, we hypothesised that prompting individuals to create a personalised plan for self-isolation using

implementation intentions would increase confidence in their ability to cope and diminish the perceived difficulty of self-isolation.

In addition to the practicalities of self-isolation, loss of routine can cause difficulty (Brooks et al., 2020). Disruption to time structure contributes to loss of mental wellbeing following unemployment, with those who retain structure in their days faring better (Martella & Maass, 2000). Maintaining time structure and daily routine has mental health benefits more generally, including self-esteem and optimism for the future (Bond & Feather, 1988). Similarly, establishing a routine can help people to cope in "isolated and controlled extreme" (ICE) environments, as can setting achievable goals, undertaking hobbies, engaging remotely with social networks and exercising (e.g. Palinkas, 2003; Smith, Kinnafick & Saunders, 2017). The WHO recommends that people self-isolating during COVID-19 should keep a routine, engage social networks remotely, and maintain healthy behaviours (WHO, 2020b).

Given these findings, we hypothesised that making a plan and, further, developing a routine for self-isolation that incorporates the above protective behaviours, would make people feel more confident in their ability to cope, in the event they would need to self-isolate. This hypothesis was tested via an online planning tool. To facilitate the construction of a routine, we adapted the "day reconstruction method", which is a diary task that helps people to organise and recall events from the previous day (Kahneman, Krueger, Schkade, Schwarz & Stone, 2004). We used a similar approach to help people to structure a day of self-isolation, which we refer to as "day preconstruction".

Managing Self-Isolation

Managing a household in which an individual must self-isolate has similarities to managing a patient at home following a medical procedure. A list of relevant behaviours must be understood, recalled and acted upon. However, a recent meta-analysis (Hoek et al., 2019)

found that patients typically cannot recall a substantial amount of relevant information, with recollections being sensitive to format. Verbal communication is outperformed by written information and, better still, video. The visual form of information matters generally. For instance, bullet points are absorbed more easily than paragraph text for public health communication (Lagassé et al., 2011) and consent documents (Jefford & Moore, 2008). However, although bullet points increase the speed at which information is read, they may be insufficient to improve recall (Wogalter & Shaver, 2001), unless combined with further simplification, via separation into themes (Duvall Antonacopoulos & Serin, 2015) or reduced text content (Jolly et al., 1995). Explicit categorisation of patient medical information can improve memory performance (Kessels, 2003), helped by specifying clear categories in advance to the recipient (Ley, 1979). Similarly, providing headings can improve memory for topics within text (Lorch et al., 1993).

To supplement video, or to replace it where it is not an option, visual cues can be introduced through the use of "infographics", which combine imagery and minimal text. Pictures can increase attention, recall of information, comprehension and subsequent adherence to medical information, and simple pictures may be especially beneficial (Houts et al., 2006, Bunge et al., 2010). In patient leaflets, cartoon illustrations alongside text can increase recall (Delp and Jones, 1996; Austin et al., 1995; Sojourner and Wogalter, 1998).

Given this evidence, we hypothesised that categorising information on how to manage a household in which someone is self-isolating into themed, bulleted infographics would improve recall and comprehension relative to the ten-point list contained in the booklet and on other public health communication channels.

Summary of Hypotheses

We tested the following six hypotheses, pre-registered online with the Open Science Framework.[1] All but H1b were directional hypotheses.

H1a: Decisions to self-isolate will be improved by providing individuals with a fast-and-frugal decision tree, compared to current public health advice given in text and tabular form.

H1b: A simple (2-level) tree will differ in effectiveness compared to a more complex (4-level) tree.

H2a: Individuals who complete a plan (with or without a routine) will be more confident in their ability to cope with self-isolation and perceive it as less difficult than individuals who read only the prevailing public health advice.

H2b: Constructing the plan or the plan with the routine will lead to greater confidence in ability to cope with self-isolation and lower perceptions of difficulty relative the prevailing public health advice.

H2c: The plan with the routine will have an additive effect, above constructing only the plan, on all measures.

H3: Recall and comprehension of current public health information describing how to manage self-isolation will be improved by providing it in the form of infographics.

Method

The experiment was a multi-stage study in which hypotheses were tested sequentially on the same set of participants. Randomisation into conditions was conducted independently at each stage. The study was carefully designed to avoid the possibility that exposure to different

[1] https://osf.io/rx6jm/?view_only=9e9df9ac702a48a88169e4529b12b8fa

conditions in earlier stages would affect responses to later stages, although this was double-checked during data analysis.

Participants

Five-hundred participants were recruited by a market research agency to be broadly nationally representative. Socio-demographic characteristics are summarised in Appendix A. Participants were paid €8.50 for undertaking the 25-minute study online, which was programmed using Gorilla Experiment Builder (Anwyl-Irvine et al., 2019).

Stage 1: Decision Trees

This stage had a simple before-and-after design. Participants were presented with ten short scenarios ("vignettes"), each describing an individual trying to decide whether they need to self-isolate. A set of five were shown initially and participants had to answer based on acquired background knowledge and understanding. The intervention page was then shown, followed by another set of five. The order of the vignettes was randomised and the two sets were counterbalanced across participants. The list of vignettes is provided in Appendix B. They were carefully written based on the need to self-isolate according to current advice, which is provided together with a full list of symptoms in Appendix C ("Control"). It was used to generate a natural ranking of the vignettes as follows(i) Subject has "primary" symptoms of COVID-19 (fever, dry cough); (ii) Subject has "secondary", flu-like symptoms (e.g. sore throat, fatigue, aches and pains); (iii) Subject has had close contact with a confirmed case or lives with someone displaying primary symptoms; (iv) Subject has had potential close contact with a suspected case or lives with someone with a potential symptom; (v) Subject does not need to self-isolate. Participants responded on a Likert scale (from 1 = "Doesn't need to self-isolate" to 7 = "Definitely needs to self-isolate"). After each set, they

were also asked how confident they were in their judgements (from 1 = “Not at all confident” to 7 = “Very confident”).

Participants were randomised to view one of three online pages (Appendix C):

- Control: The page displayed advice from Ireland’s Health Service Executive (HSE) webpage about restricted movements and self-isolation, together with the symptom table provided in the booklet.
- Simple tree: The page displayed a simple, 2-level fast-and-frugal tree, designed to aid decisions about self-isolation and restricting movements.
- Complex tree: The page displayed a more complex, 4-level fast-and-frugal tree, designed to aid decisions about self-isolation and restricting movements.

During the second set of vignettes, participants could click back to consult the advice page they had just seen. These checks were recorded. The primary outcome of interest was improvement in performance following the intervention, although the absolute level of performance in determining whether self-isolation was necessary, both before and after the intervention, was also of interest.

Stage 2: Planning Tools

Participants were randomly assigned into one of three conditions: “control”, “plan only”, or “plan + routine”. Participants in the control condition were presented with information from the booklet about “keeping well during self-isolation” and asked to read the information carefully. This information is shown in Appendix D.

Participants in the other two conditions interacted with an online planning tool. In the plan only condition, they were instructed that the next stage of the study would involve creating a plan that they could follow should they need to self-isolate. This was achieved by asking

participants questions about their living situation, including which room they could sleep in, how they could obtain groceries, and who they could stay in contact with and how (e.g. via phone call or social media). Responses were used to create a personalised plan, which was added in place of the third paragraph on the information page presented to the control participants (see example in Appendix D). Two lines were added based on advice from public health websites: to call their GP if they develop symptoms of COVID-19 and to keep some structure to their day.

Participants in the "plan + routine" condition completed the same plan, but before being presented with the personalised plan, the online tool also engaged them in the day preconstruction task. They were told that "coping with self-isolation can be made a bit easier by keeping some structure in your day, particularly when you feel well enough." They were asked to think about the things they might plan to do to help structure their day if they needed to self-isolate. They were given advice about what these might be, including sticking to a regular sleep pattern, getting some light exercise, being mobile, getting fresh air, staying in contact with others (via phone or social media), undertaking hobbies, and targeting small goals they might want to achieve. Next, participants were asked to imagine that they needed to self-isolate and to think about the kinds of things they would plan to do tomorrow, if they were self-isolating but feeling well enough. Instructions were adapted from the day reconstruction booklet (Kahneman et al., 2004). They were told to think of tomorrow as a continuous series of scenes or episodes split into three parts: morning (from waking up until lunch or mid-day meal); afternoon (from lunch until dinner or evening meal); evening (from dinner until going to sleep). They were then shown a list of tasks or activities they might do during each part of the day and asked to choose which they would like to do during each part of the day. They could choose from the list or type in another activity not on the list. For each period, they were also asked to put the tasks in the order they might do them. Finally,

participants were presented with their personalised plan and day schedule (see example in Appendix D). Full details that would allow replication of this condition are available as supplemental material.

After reading the information or engaging with the online tool for their respective conditions, participants were asked to rate the helpfulness of the information they had read (from 1 = "not at all" to 7 = "extremely"), and to rate how likely they would be to direct someone else to it if they needed to self-isolate (from 1 ="highly unlikely" to 7 = "highly likely"). These measures were presented as ostensibly the only measures of interest with direct relevance for the plans. However, our primary outcome variables were elicited in the subsequent set of questions, ahead of which participants were told that we were interested in their views on self-isolation more generally. They were asked to imagine they had been requested to self-isolate from now and asked how confident they felt in their ability to cope (from 1 = "not at all" to 7 = "extremely"). We also asked how likely they thought they would be to continue to comply if informed that their isolation period had to be extended beyond the expected 14 days (from 1 = "highly unlikely" to 7 = "highly likely"). Intentions to comply decrease when the isolation period is extended beyond what is expected (Briscese et al., 2020), but if participants feel better able to cope with self-isolation, they should be less likely to decrease their intentions to comply with an extension. Finally, participants were asked how difficult they thought they would find five issues (Barari et al., 2020): lack of freedom, boredom, lack of fresh air, lack of exercise, loneliness (from 1 = "not at all difficult" to 7 = "extremely difficult").

Stage 3: Infographics

Participants were asked again to imagine that they were about to self-isolate and that they were about to view guidelines on how to self-isolate properly. They were encouraged to read

the guidelines in detail, but not informed about any subsequent tasks. Half the participants were randomised to view the guidelines as presented in the booklet. The ten guidelines were shown in a one-to-ten numbered list, with additional information in short paragraphs below each guideline. The other half received the information presented as three infographics categorised into three themes of advice: for "individuals", "interacting with other people", and "household management". The information was identical to the control condition, but presented as bullet points next to relevant cartoon images. In both conditions, the guidelines were shown across three online pages, which participants could scroll between with no time limit. The pages are shown in Appendix E.

Participants then completed three tasks. The first simply asked how easy they thought they would find it to follow all the guidelines (from 1 = "very difficult" to 7 = "very easy"). The second tested recall. Participants were shown twenty guidelines (ten official, ten distractors), presented as ten pairs, with combinations and orders randomised across participants. For each pair, they were asked to identify whether one (and if so which), both or neither guideline was in the official guidelines. The third task tested comprehension. Participants responded to six multiple choice questions (MCQs) about the guidelines. The order of questions and response options was randomised.

A final part of the study contained standard questions about socio-demographic background.

Results

There were no significant differences in the socio-demographic characteristics of the control and treatment groups in each of the three randomisation stages.

Stage 1: Decision Trees

Prior to the intervention, 38 participants assigned either a 7 or a 1 to all vignettes. Following the intervention, a further 23 did so. In keeping with the preregistration plan, before undertaking any analysis by condition we removed these participants, along with two others who responded unrealistically rapidly, leaving a final sample of 437. All results hold if these exclusions are restored.

Before analysing performance by condition, we consider absolute and relative responses pre- and post-intervention. Figure 1 provides mean responses on the 1-to-7 scale for each scenario. On the upside, for the scenarios in which individuals had primary symptoms, the mean response was slightly above 6, with 66% of respondents assigning the maximum of 7 and 88% assigning a 5 or higher. This was unaffected by the intervention. Respondents were far less sure about the scenarios in which individuals had secondary symptoms. Pre-intervention, the mean response was exactly at the midpoint of 4, with wide dispersion (sd = 2.2), with only 49% responding with a 5 or higher. Recall that the prevailing public health guidelines were that people with these secondary symptoms should self-isolate. After viewing the interventions, pooling across conditions, these responses increased (Wilcoxon matched pairs, $p < .01$), although the increase was small and dispersion persisted (mean = 4.4, sd = 2.3). Perhaps surprisingly, participants gave higher responses to scenarios involving close contact, especially with a confirmed case or individuals with primary symptoms, but also with suspected or potential cases. In both situations, individuals are recommended to further restrict movements, but only to fully self-isolate if they go on to develop symptoms. These responses were not significantly affected by the intervention. We consider potential explanations for these departures from the guidance in the Discussion. Lower responses were given to the scenario in which the individual did not have relevant symptoms and scores reduced further post-intervention (Wilcoxon matched pairs, $p < .01$).

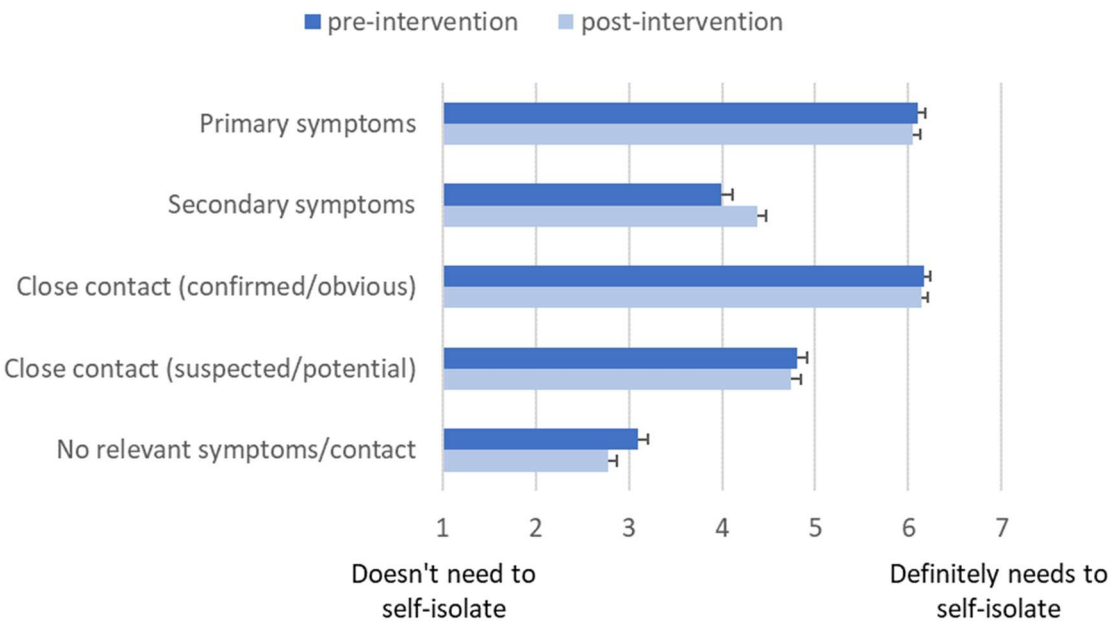


Figure 1. Mean scores for assessments of the need to self-isolate by scenario, pre- and post-intervention

Responses to the scenarios that unambiguously implied a need for self-isolation varied by condition. Figure 2 shows the proportions of participants by condition who responded with a 7 for the scenario involving primary symptoms and with a 5 or higher (the displayed pattern is similar for multiple cut-off points) for the scenario involving secondary symptoms. Post-intervention, the proportion of individuals who assigned a 7 to the primary symptom scenarios increased only in the complex tree condition, decreasing slightly in the other two. For the secondary symptom scenarios, post-intervention responses of 5 and above increased in all conditions, but most strongly in the complex tree condition. An important aspect to note, however, is that despite randomisation into conditions there were pre-intervention differences by condition also. We conducted multiple checks for differences by socio-demographic background characteristics, none of which can explain the difference. Rather, it appears that randomisation happened to assign individuals who were generally more cautious to the tree conditions, especially the complex tree condition. Fortunately, having recorded responses both pre- and post-intervention, we could control for this at the individual level.

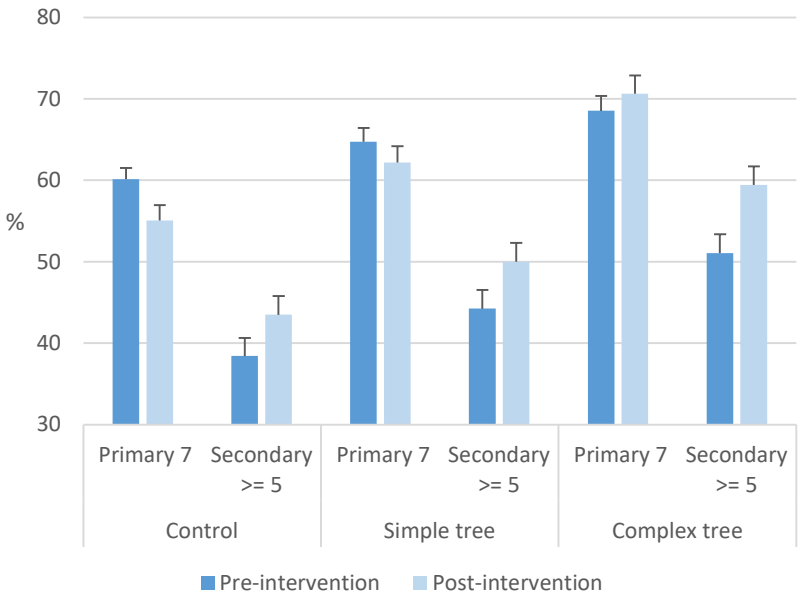


Figure 2. Proportions giving responses of 7 for primary symptoms and of 5 or higher for secondary symptoms, pre- and post-intervention, by condition

Table 1 presents regression models that test for significant differences in post-intervention responses, controlling for pre-intervention responses. Two control variables are included: the participant's response to the equivalent pre-intervention scenario and their mean response to the other four pre-intervention scenarios. A variable is also included to control for differences between specific sets of vignettes (Set A versus Set B). Models 1-3 are binary logistic regressions, where the dependent variable is whether the participant responded with a 7 to the scenario involving primary symptoms. Models 4-6 are ordered logistic regressions for the response to the scenario involving secondary symptoms. These models pass the standard Brant test of the proportional odds assumption and are robust to multiple specifications, including binary models with alternative cut-points.

Relative to the control condition, viewing the more complex decision tree significantly increased the likelihood that participants decided that self-isolation was required. Controlling for multiple background characteristics (gender, age, educational attainment) did not alter this

finding. However, in the scenario with primary symptoms, there was a significant interaction of the intervention with educational attainment (measured by whether the participant held a degree). Model 3 shows that the decision trees essentially altered the decisions of the 65% of the sample who were not degree holders ($p < .01$ in both cases), with no impact on those who were (the coefficient on the interaction term cancels out the coefficient on the main effect). For the scenarios involving secondary symptoms, there was evidence that both decision trees increased the likelihood of deciding that self-isolation was needed. The interaction with educational attainment was in the same direction but short of statistical significance.

Table 1. Logistic and ordered logistic regression models for responses to scenarios involving primary and secondary symptoms respectively

	Primary symptoms Logit (Response = 7)			Secondary symptoms (Ordered logit)		
	(1)	(2)	(3)	(4)	(5)	(6)
Condition (Ref=Control)						
Simple tree	**.289**	**.294**	**.661*** **	**.241**	**.309***	**.385***
	(.251)	**(.255)**	**(.311)**	**(.208)**	**(.209)**	**(.256)**
Complex tree	**.677*** **	**.619** **	**1.051*** **	**.535*** **	**.518*** **	**.782*** **
	(.265)	**(.269)**	**(.346)**	**(.215)**	**(.217)**	**(.280)**
Pre-intervention responses						
Matching scenario	1.177***	1.173***	1.189***	.225***	.207***	.207***
	(.227)	(.230)	(.232)	(.047)	(.047)	(.047)
Other scenarios	-.025	-.027	-.017	.098	.073	.073
	(.098)	(.101)	(.102)	(.084)	(.084)	(.084)
Vignette Set B	.829***	.829***	.817***	-.399**	-.379**	-.379**
	(.214)	(.216)	(.217)	(.178)	(.179)	(.179)
Male		-.397	-.413*		-.482***	-.482***
		(.214)	(.216)		(.174)	(.174)
Age Ref=(18-39)						
40-59		.209	.240		-.291	-.291
		(.280)	(.216)		(.226)	(.226)
60+		.342	.383		-.521**	-.521**
		(.278)	(.280)		(.224)	(.224)
Degree		.431*	1.234***		.067	.355
		(.239)	(.418)		(.191)	(.325)
Education interaction						
Simple tree * Degree			**-1.152** **			**-.204**
			(.557)			**(.447)**
Complex tree * Degree			**-1.120** **			**-.651**
			(.564)			**(440)**
Constant		-.911	-1.233			
		(.559)	(.581)			
N	437	437	437	437	437	437

*** $p < .01$; ** $p < .05$; * $p < .10$ (single-tailed in the first two rows only, consistent with the directional main hypothesis).

Overall, therefore, these models provide clear support for an improvement in decisions among those who viewed decision trees, confirming H1a, with the effect driven by participants without degree-level education. However, the models fall short of confirming H1b. Across all six models, tests for a difference between coefficients on the simple tree and the more complex tree find the difference to be short of statistical significance, although the point estimates are consistently higher for the more complex tree. In addition to these main findings, the models in Table 1 show that males were less likely to identify these scenarios as requiring self-isolation and that older people were less likely to do so for the scenario involving secondary symptoms.

Further analyses examined whether the trees affected participants' confidence in their decisions, the likelihood that participants consulted the page again when making the decision, and how well responses correlated with the rank ordering of the five vignettes. Comparing confidence ratings pre- and post-intervention, participants who viewed the control intervention experienced a marginal decrease in confidence, while those who viewed either decision tree experienced increases, with the difference between conditions being statistically significant (Wilcoxon unmatched: control versus simple, $p < .01$; control versus complex, $p < .10$). Those who viewed the simple decision tree were significantly less likely to click back to the page when making decisions (Control 38%, Simple 25%, Complex 41%; $\chi^2(2) = 9.50$, $p < .01$), perhaps because they felt that they had absorbed the information. Controlling for confidence and clicking back to the page leaves the main effects reported above intact. Lastly, there were no significant differences in the rank ordering of responses between conditions, although this result may largely have reflected the extent to which variability in rank orderings was dominated by low responses to the secondary symptoms scenario, which were common across conditions.

Stage 2: Planning Tools

Prior to analysis by condition, 28 participants were excluded, as a question asked in the final section showed that they had undertaken a period of self-isolation already during the course of the pandemic. The main outcome variables in this stage were self-reported confidence in the ability to cope with self-isolation, stated willingness to comply if a 14-day period of self-isolation had to be extended, and a composite measure of difficulty coping with five specific aspects of self-isolation. Checks confirmed that none of these outcome variables displayed any relationship to the conditions participants experienced in Stage 1.

Mean responses to the confidence question were 5.80 (sd = 1.42), 5.99 (1.29) and 6.00 (1.38) for the control, plan and plan + routine conditions respectively. The difference between the control and treatment conditions (pooled) was marginally statistically significant (Wilcoxon unmatched, p = .06). Equivalent responses to the extended period question were 6.21 (1.48), 6.17 (1.41), and 6.17 (1.25), with no significant differences. Correlations between responses to the five specific aspects of self-isolation were modest, ranging from 0.28-0.66. These were combined into an overall difficulty score by standardising each and computing the individual mean. There were no significant differences between control and treatment conditions.

Both seven-category responses were strongly left-skewed and so responses of 4 or less were pooled to create a four-category ordinal dependent variable. For ease of comparison we inverted the composite difficulty score to generate an ease of coping score and transformed it into a four-category variable based on a quartile split. Table 2 shows three ordinal logistic regressions, in which the plan and plan + routine conditions are pooled. The results reveal a

consistent differential pattern by age across these three dependent variables.[2] All models pass the Brant proportional odds test.

There was a significant interaction between the treatment and age, which had three distinct aspects. First, the planning interventions were positive for adults aged under 40. Second, older people, in particular those over 60, were significantly more confident about coping with self-isolation. These relationships are illustrated in Figure 3, which charts mean confidence scores by condition and age. In the control condition, younger adults under the age of 40 were less confident in their ability to cope. The planning treatments resulted in their scores roughly equalising with those of older adults. The third aspect of this interaction was that the planning interventions were less effective for older adults, especially those over 60. Among this group they may even be counterproductive. The interaction in model 8, for willingness to comply with an extended period of self-isolation, is strongly negative. For this dependent variable, fitting a model only to those aged over 60 reveals a negative treatment effect ($p < .01$). Overall, therefore, there was support for H2a only among adults under 40.

To test H2b, the above models were re-estimated separating the two treatment conditions. All coefficients were positive, with both conditions statistically significant for confidence, neither significant for extending the period of self-isolation, and the plan + routine condition significant for ease of coping. The pattern of interactions with age occurred for both treatment conditions.

With respect to H2c, while point estimates suggested the interaction was stronger for the plan + routine condition, the relevant differences for all three dependent variables were short of statistical significance.

[2] The interaction with age was not a pre-registered hypothesis. After testing models with no interaction, diagnostic tests revealed that they did not satisfy the proportional odds assumption specifically with respect to the age variable. Including the interaction resolved this issue.

Table 2. Ordered logistic regression models for confidence in coping with self-isolation, willingness to extend self-isolation, and ease of coping with specific aspects of self-isolation

	Confidence (7)	Extended period (8)	Ease of Coping (9)
Plan	**.878*** **	**.292**	**.480***
	(.338)	**(.352)**	**(.336)**
Male	.377**	-.047	.147
	(.172)	(.186)	(.166)
Degree	-.069	.083	.052
	(.194)	(.209)	(.183)
Age Ref=(18-39)			
40-59	.342	.202	.930**
	(.383)	(.415)	(.384)
60+	.964***	1.464***	.971***
	(.376)	(.463)	(.373)
Age interaction			
Plan * 40-59	**-.601**	**-.403**	**-.737**
	(.455)	**(.482)**	**(.449)**
Plan * 60+	**-1.084****	**-.1.414*****	**-.756***
	(.454)	**(.533)**	**(.445)**
N	472	472	472

*** p < .01; ** p < .05; * p < .10 (single-tailed in the first row only, consistent with the directional main hypothesis).

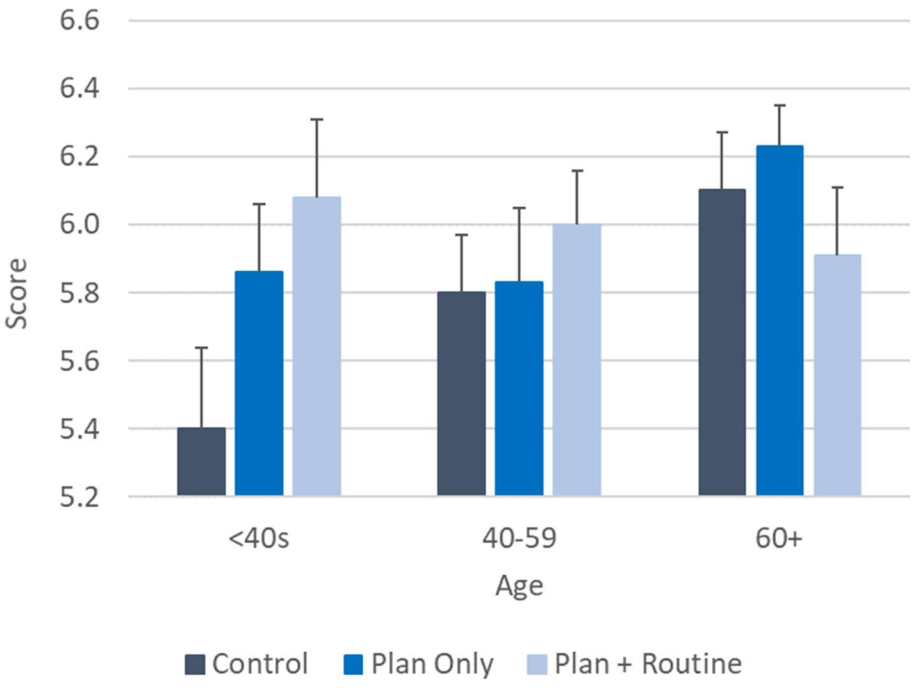


Figure 3. Mean confidence scores for coping with self-isolation by condition and age

Participants themselves judged the plan without the routine to be significantly more helpful than both other conditions (Wilcoxon unmatched, plan versus control, $p < .05$; plan versus plan + routine, $p < 0.01$). They were also more likely to recommend both the information in the control condition and in the plan condition relative to the plan + routine condition (Wilcoxon unmatched, $p < .01$ in both cases), supporting the idea that the addition of the routine had backfired among at least some participants.

Stage 3 - Infographics

Participants were excluded if they took less than an average of five seconds per page to read the information, leaving a sample of 446. Results are not sensitive to this exclusion, or to the precise temporal cut-off. Over and above how easy participants thought the information was to follow, the primary outcome variables were scores out of ten for the recall task and scores out of six for the comprehension task. Checks confirmed that none of these variables had any relationship to the conditions assigned in the previous two stages.

Figure 4 displays mean responses. To indicate effect size, the vertical axes are set to approximately one standard deviation of the relevant outcome variable. There was no statistically significant difference in how easy participants thought the advice was to follow. However, participants in the infographic condition had a higher score than those in the control condition for recalling the advice and for comprehension of the advice (Wilcoxon unmatched, $p < .05$ and $p < .01$ respectively). Thus, while participants apparently did not feel that the infographics were easier to follow, this form of displaying the information improved both recall and comprehension, confirming H3.

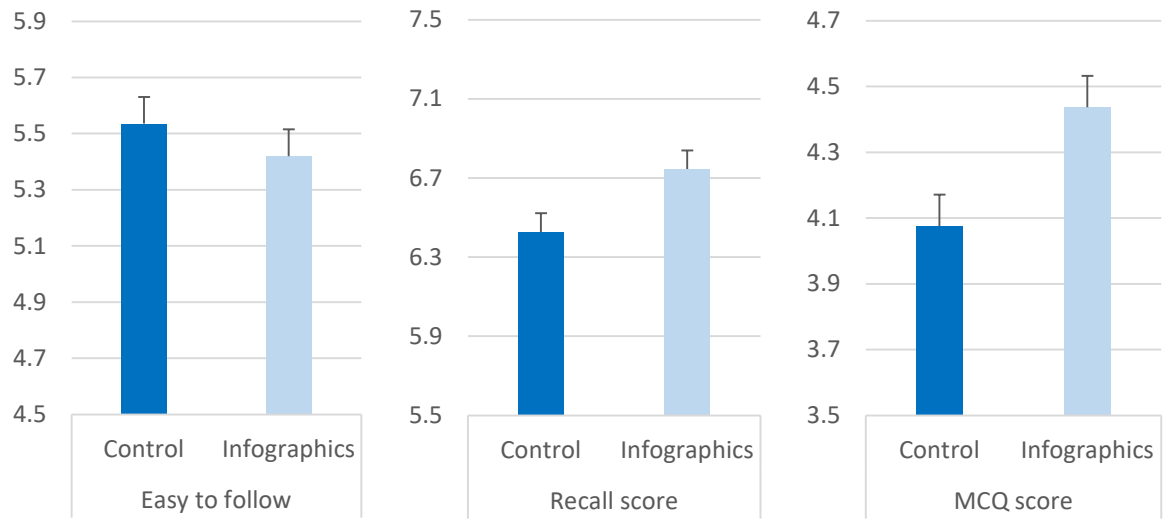


Figure 4. Mean scores for easiness to follow, recall questions and multiple-choice comprehension questions (MCQs), by condition

Distributions of scores for both recall and comprehension were non-normal and left skewed. To conduct more detailed analysis by subgroup, we converted the scores into ordinal variables (six categories for recall, four for comprehension). Results are not sensitive to these precise transformations. Models are presented in Table 3. All pass the Brant proportional odds test.

There were no significant differences by background characteristics in responses regarding how easy the information was to follow. However, consistent with the bivariate findings above, Table 3 reveals that the infographics had a consistently positive impact on both recall and comprehension. Recall was generally better among participants who held a degree. Comprehension was better among older adults, perhaps reflecting experience in managing a household. However, the pattern of interactions indicates that viewing the infographics had differential effects by gender and educational attainment. More specifically, models 11 and 13 provide evidence that the infographics were of greater help to women, while model 11 also suggests that they were more beneficial for participants who did not hold a degree.

Table 3. Ordered logistic regression models for scores for recall and comprehension (MCQs)

	Recall		Comprehension	
	(10)	(11)	(12)	(13)
Infographics	**.365****	**1.053*****	**.420*****	**.792*****
	(.168)	**(.267)**	**(.162)**	**(.257)**
Male	-.201	.286	.001	.295
	(.167)	(.241)	(.161)	(.229)
Age Ref=(18-39)				
40-59	.189	.231	.653***	.670***
	(.222)	(.223)	(.211)	(.212)
60+	.132	.146	.482**	.475**
	(.215)	(.216)	(.209)	(.209)
Degree	.379**	.723***	.195	.330
	(.187)	(.187)	(.180)	(.246)
Interactions				
Infographics * Male		**-.935*****		**-.581***
		(.337)		**(.325)**
Infographics * Degree		**-.638***		**-.241**
		(.356)		**(.341)**
N	446	446	446	446

*** p < .01; ** p < .05; * p < .10 (single-tailed in first row only, consistent with the directional main hypothesis).

Discussion

This three-stage study tested whether decision trees could improve decisions concerning the need to self-isolate, whether online planning tools could increase confidence in the ability to cope with self-isolation, and whether infographics could improve recall and comprehension of information about how to self-isolate. In all three stages, the behavioural interventions generated statistically significant, positive outcomes. Overall, therefore, the study provides evidence that behaviourally informed decision aids can be used to support self-isolation during the COVID-19 pandemic. Findings from the study have now been incorporated into the Department of Health social media campaign and have been promoted by the Department through its online channels. This final section addresses three further issues: individual differences, the absolute level of performance in recognising the need to self-isolate, and the benefits of behavioural pre-testing.

The results of all three stages contained notable individual differences, with both commonalities and contrasts between stages. In Stages 1 and 3, the decision trees and infographics were more effective for participants with lower educational attainment (measured by whether they held a degree). This is an important aspect of the findings given concerns that COVID-19 may have disproportionate effects on those in lower socio-economic groups, both within and between nations (Ahmed et al., 2020; van Dorn, Cooney, & Sabin, 2020). In Stages 2 and 3, older adults (those aged over 40) emerged as having greater confidence in their ability to cope with self-isolation and better understanding of how to run a household in which an individual needs to self-isolate. The latter effect was not altered by the use of infographics in Stage 3, but the planning tools of Stage 2 were beneficial to younger adults' confidence in coping with self-isolation. A clear danger is that some younger adults who do not feel confident about coping with self-isolation, either psychologically or practically, will be slower to self-isolate when they should. Public health authorities can clearly design communication materials that address this concern, similar to those tested here, with this target population specifically in mind.

The current study set out to test behaviourally informed communication materials and, given this, dependent variables were primarily designed to permit comparison of relative outcomes between conditions. However, one aspect of the absolute outcomes was a surprise result and requires specific mention. When the data were collected, Ireland had been subject to extensive media coverage of the variety of presentations of COVID-19 symptoms and widespread advice on the need to self-isolate if experiencing any flu-like symptoms. Yet participants were surprisingly equivocal about an individual's need to self-isolate when they had secondary symptoms only, without a fever or dry cough. The two scenarios tested involved an individual described as "tired, achy all over and has a blocked nose" and another who was "feeling achy, has a sore throat and is generally a bit under the weather". A

substantial proportion of participants thought these individuals did not need to self-isolate and had less reason to do so than individuals who were asymptomatic but had been in contact with someone with primary symptoms. There are a number of potential explanations for these decisions, which straightforwardly contravene the public health guidance. One factor that could have influenced responses was media discussion at the time regarding criteria for obtaining a COVID-19 test, which distinguished more strongly between primary and secondary symptoms. However, confusion arising from this source is insufficient to explain why participants ranked those who were asymptomatic but had had contact with confirmed or suspected cases above those with secondary symptoms. The greater weight placed by participants on contact with others than on actual symptoms might instead have been driven by perceptions of what constituted risky behaviour. Similarly, the addition of a narrative for how the virus could have been contracted may have increased the subjective probability that the individual has it. Or, more simply, familiarity with cold and flu-like symptoms might have led to underestimation of the risk entailed. Whatever the explanation, or combination of explanations, the overriding issue is that the public health advice appears to be competing with individuals' own internal models for the likelihood of contracting COVID-19, with disadvantageous implications for the perceived need to self-isolate. A diagnostic study that seeks to understand such internal models might assist in designing interventions to bring decisions more into line with public health guidance.

The preceding argument highlights a hazard when trying to deploy behavioural science as a rapid response to the pandemic. Ideally, applied behavioural science involves a careful behavioural diagnosis to inform the design of interventions, followed by pre-testing (Lunn, 2019), yet pressures of time may make this impossible. The present study shows that an experiment can be deployed quickly to test and improve relevant public health communications. It also shows the advantage of proper experimental testing over standard

techniques of marketing research, since participants subjective opinions about the usefulness of the interventions sometimes did not match objective measures of their decisions or capabilities post-intervention. Yet the study also highlights shortcomings in our understanding of the relevant psychological mechanisms during an unprecedented and rapidly evolving pandemic.

References

Ahmed, F., Ahmed, N. E., Pissarides, C., & Stiglitz, J. (2020). Why inequality could spread COVID-19. *The Lancet Public Health*, 5(5), e240. https://doi.org/10.1016/S2468-2667(20)30085-2

Anwyl-Irvine, A. L., Massonnié, J., Flitton, A., Kirkham, N., & Evershed, J. K. (2020). Gorilla in our midst: An online behavioral experiment builder. *Behavior Research Methods*, 52(1), 388-407. https://doi.org/10.3758/s13428-019-01237-x

Austin, P. E., Matlack, R., Dunn, K. A., Kosler, C., & Brown, C.K. (1995). Discharge instructions: Do illustrations help our patients understand them? *Annals of Emergency Medicine*, 25, 317–20. https://doi.org/10.1016/s0196-0644(95)70286-5

Barari, S., Caria, S., Davola, A., Falco, P., Fiorin, S., Hensel, L., ... & Ledda, A. (2020). *Evaluating COVID-19 Public Health Messaging in Italy: Self-Reported Compliance and Growing Mental Health Concerns*. Working Paper.

Bond, M. J., & Feather, N. T. (1988). Some correlates of structure and purpose in the use of time. *Journal of Personality and Social Psychology*, *55*(2), 321-329. https://doi.org/10.1037/0022-3514.55.2.321

Briscese, G., Lacetera, N., Macis, M., & Tonin, M. (2020). *Compliance with COVID-19 Social-Distancing Measures in Italy: The Role of Expectations and Duration* (No. w26916). National Bureau of Economic Research. DOI: https://doi.org/10.3386/w26916

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8

Bunge, M., Mühlhauser, I., & Steckelberg, A. (2010). What constitutes evidence-based patient information? Overview of discussed criteria. *Patient Education and Counseling*, 78(3), 316-328. https://doi.org/10.1016/j.pec.2009.10.029

Butcher, K. R. (2006). Learning from text with diagrams: Promoting mental model development and inference generation. *Journal of Educational Psychology*, 98, 182-197. DOI: 10.1037/0022-0663.98.1.182

Day, T., Park, A., Madras, N., Gumel, A., & Wu, J. (2006). When Is Quarantine a Useful Control Strategy for Emerging Infectious Diseases? *American Journal of Epidemiology*, 163(5), 479–485. https://doi.org/10.1093/aje/kwj056

Delp, C., & Jones, J. (1996). Communicating information to patients: The use of cartoon illustrations to improve comprehension of instructions. *Academic Emergency Medicine*, 3, 264–70. https://doi.org/10.1111/j.1553-2712.1996.tb03431.x

Duvall Antonacopoulos, N. M., & Serin, R. C. (2015). Comprehension of Online Informed Consents: Can It Be Improved? *Ethics & Behavior*, 26(3), 177–193. https://doi.org/10.1080/10508422.2014.1000458

Gigerenzer, G., & Gaissmaier, W. (2011). Heuristic decision making. *Annual Review of Psychology*, 62, 451-482. DOI: 10.1146/annurev-psych-120709-145346

Gollwitzer, P. M. (1999). Implementation intentions: strong effects of simple plans. *American psychologist*, *54*(7), 493. https://doi.org/10.1037/0003-066X.54.7.493

Green, L., & Mehr, D. R. (1997). What alters physicians' decisions to admit to the coronary care unit? *Journal of Family Practice*, 45, 219-226.

Hagger, M. S., & Luszczynska, A. (2014). Implementation intention and action planning interventions in health contexts: State of the research and proposals for the way forward. *Applied Psychology: Health and Well-Being*, 6(1), 1-47. https://doi.org/10.1111/aphw.12017

Hoek, A. E., Anker, S. C. P., van Beeck, E. F., Burdorf, A., Rood, P. P. M., & Haagsma, J. A. (2019). Patient discharge instructions in the emergency department and their effects on comprehension and recall of discharge instructions: A systematic review and meta-analysis. *Annals of Emergency Medicine*. https://doi.org/10.1016/j.annemergmed.2019.06.008

Houts, P. S., Doak, C. C., Doak, L. G., & Loscalzo, M. J. (2006). The role of pictures in improving health communication: A review of research on attention, comprehension, recall, and adherence. *Patient Education and Counseling*, 61(2), 173–190. https://doi.org/10.1016/j.pec.2005.05.004

Jefford, M., & Moore, R. (2008). Improvement of informed consent and the quality of consent documents. *The Lancet Oncology*, 9(5), 485–493. https://doi.org/10.1016/s1470-2045(08)70128-1

Jolly, B. T., Scott, J. L., & Sanford, S. M. (1995). simplification of emergency department discharge instructions improves patient comprehension. *Annals of Emergency Medicine*, 26(4), 443–446. https://doi.org/10.1016/s0196-0644(95)70112-5

Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N. & Stone, A. A. (2004). A survey method for characterizing daily life experience: The day reconstruction method. *Science*, *306*(5702), 1776-1780. DOI: 10.1126/science.1103572

Kessels, R. P. C. (2003). Patients' memory for medical information. *Journal of the Royal Society of Medicine*, 96(5), 219–222. https://doi.org/10.1177/014107680309600504

Lagassé, L. P., Rimal, R. N., Smith, K. C., Storey, J. D., Rhoades, E., Barnett, D. J., ... & Links, J. (2011). How accessible was information about H1N1 flu? Literacy assessments of CDC guidance documents for different audiences. *PloS one*, 6(10). https://doi.org/10.1371/journal.pone.0023583

Lee, A. Y. (2001). The mere exposure effect: An uncertainty reduction explanation revisited. *Personality and Social Psychology Bulletin*, *27*(10), 1255-1266. https://doi.org/10.1177/01461672012710002

Ley, P. (1979). Memory for medical information. *British Journal of Social and Clinical Psychology*, 18(2), 245–255. https://doi.org/10.1111/j.2044-8260.1979.tb00333.x

Lorch, R. F., Lorch, E. P., & Inman, W. E. (1993). Effects of signaling topic structure on text recall. *Journal of Educational Psychology*, 85(2), 281–290. https://doi.org/10.1037/0022-0663.85.2.281

Lunn, P. D. (2019). Nudger beware: Diagnosis precedes remedy. *Journal of Behavioral Economics for Policy*, 3(S), 23-26.

Lunn, P. D., Belton, C. A., Lavin, C., McGowan, F. P., Timmons, S., & Robertson, D. A. (2020). Using Behavioral Science to help fight the Coronavirus. *Journal of Behavioral Public Administration*, *3*(1). https://doi.org/10.30636/jbpa.31.147

Martella, D., & Maass, A. (2000). Unemployment and life satisfaction: The moderating role of time structure and collectivism 1. *Journal of Applied Social Psychology*, *30*(5), 1095-1108. https://doi.org/10.1111/j.1559-1816.2000.tb02512.x

Martignon, L., Vitouch, O., Takezawa, M., & Forster, M. R. (2003). Naive and yet enlightened: From natural frequencies to fast and frugal decision trees. In *Thinking:*

Psychological Perspective on Reasoning, Judgment, and Decision Making (eds. Hardman, D. & Macchi, L.), pp. 189-211. John Wiley and Sons.

Mayer, R. E. (2002). Multimedia learning. *Psychology of Learning and Motivation*, 41, 85-139. https://doi.org/10.1016/S0079-7421(02)80005-6

McCrudden, M. T., Schraw, G., Lehman, S., & Poliquin, A. (2007). The effect of causal diagrams on text learning. *Contemporary Educational Psychology*, 32, 367-388. https://doi.org/10.1016/j.cedpsych.2005.11.002

Palinkas, L. A. (2003). The psychology of isolated and confined environments: Understanding human behavior in Antarctica. *American Psychologist*, *58*(5), 353. https://doi.org/10.1037/0003-066X.58.5.353

Smith, N., Kinnafick, F., & Saunders, B. (2017). Coping strategies used during an extreme Antarctic expedition. *Journal of Human Performance in Extreme Environments*, *13*(1), 1. DOI: 10.7771/2327-2937.1078

Sniehotta, F. F. (2009). Towards a theory of intentional behaviour change: Plans, planning, and self-regulation. *British journal of health psychology*, *14*(2), 261-273. https://doi.org/10.1348/135910708X389042

Sojourner, R. J., & Wogalter, M.S. (1998). The influence of pictorials on the comprehension and recall of pharmaceutical safety and warning information. *International Journal of Cognitive Ergonomics*, 2, 93–106. https://doi.org/10.1177/009286159703100340

van Dorn, A., Cooney, R. E., & Sabin, M. L. (2020). COVID-19 exacerbating inequalities in the US. *The Lancet*, 395(10232), 1243-1244. https://doi.org/10.1016/S0140-6736(20)30893-X

Wogalter, M. S., & Shaver, E. F. (2001). Evaluation of List vs. Paragraph Text Format on Search Time for Warning Symptoms. *Advances in Occupational Ergonomics and Safety*, 4, 434-438.

World Health Organisation (2020a). Critical preparedness, readiness and response actions for COVID-19. Available at www.who.int

World Health Organisation (2020b). Mental health and psychosocial considerations during the COVID-19 outbreak. Available at www.who.int

Appendix A – Sample Characteristics

Participant Socio-Demographic Characteristics

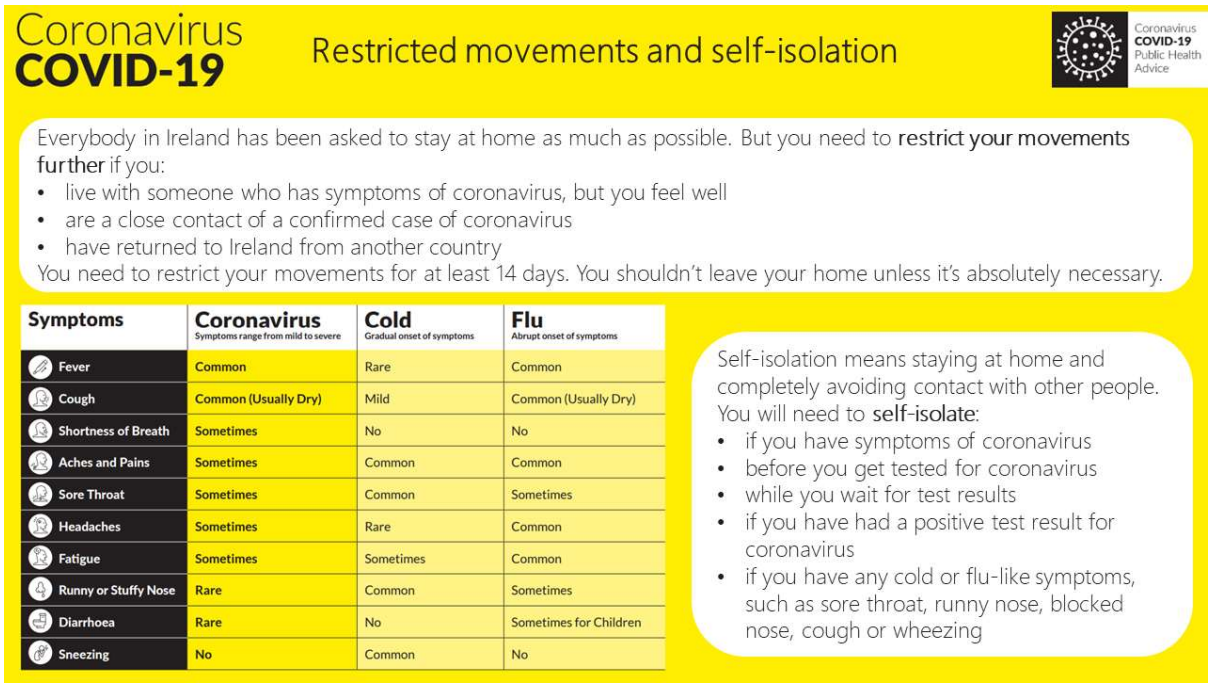
		n	%
Gender	Men	250	50
	Women	250	50
Age	Under 40 years	161	32
	40 – 59 years	172	34
	60 years +	167	33
Education	Degree or above	175	35
	Below degree	325	65
Employment	Employed	250	50
	Not employed	250	50
Urban-Rural	Urban	298	60
	Rural	202	40

Appendix B – Vignettes for Stage 1

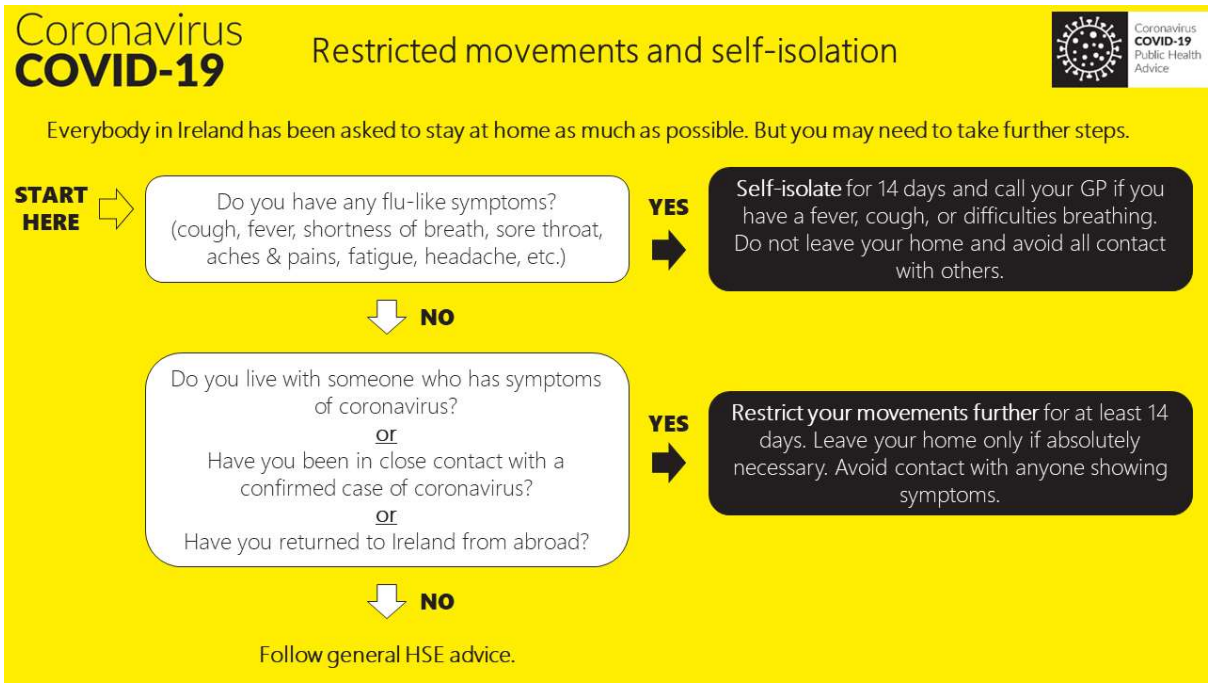
(a)	Jack has been unwell the last few days. He has a dry cough and feels like he has a fever, although he doesn't have a thermometer so can't check. He's feeling a little bit better today though, and thinks he's on the mend.	Sharon got back from holidays in Spain at the end of February. Since last night she's had a tight chest and a high temperature. But it's been over a month since she was away, and she doesn't know anyone who's sick.
(b)	Tom is feeling tired, achy all over and has a blocked nose. A good friend of his just tested positive for coronavirus, but he hasn't seen him recently. Tom was talking to him on the phone and his symptoms sound different to his own.	Jackie is feeling achy, has a sore throat and is generally a bit under the weather. She doesn't have a cough or a fever though, so she reckons it's just the start of a cold.
(c)	Lucy lives with her boyfriend in a one-bed flat. He started feeling ill yesterday evening and has been coughing through the night. Lucy is looking after him but slept on the couch just to be safe.	Mary called into her daughter's house for a cup of tea and a chat last week. The next day, her daughter developed symptoms of coronavirus and has since tested positive. Mary noticed a rash on her arm today but doesn't think that's a symptom of the virus.
(d)	John visited his mum in her nursing home just under 2 weeks ago. He made sure not to hug her or touch her. Unfortunately, his mother was transferred to hospital with suspected coronavirus last night. John himself is feeling fine.	Darragh lives with his wife and two-year-old son. Their little boy has been out of sorts the past few days and has a bit of a temperature. However, Darragh thinks this is pretty normal for a toddler, and he hasn't been in contact with other children.
(e)	Kevin has been going out for a short walk by himself every day to get some fresh air and some exercise. He's been sniffling and sneezing a lot but he reckons it's just the start of hay fever season.	Shane moved home from London three weeks ago after losing his job. He self-isolated in his room when he got back but never developed any symptoms. However, he's just heard today that his old housemate from London is waiting to get tested for coronavirus.

Appendix C – Posters for Stage 1

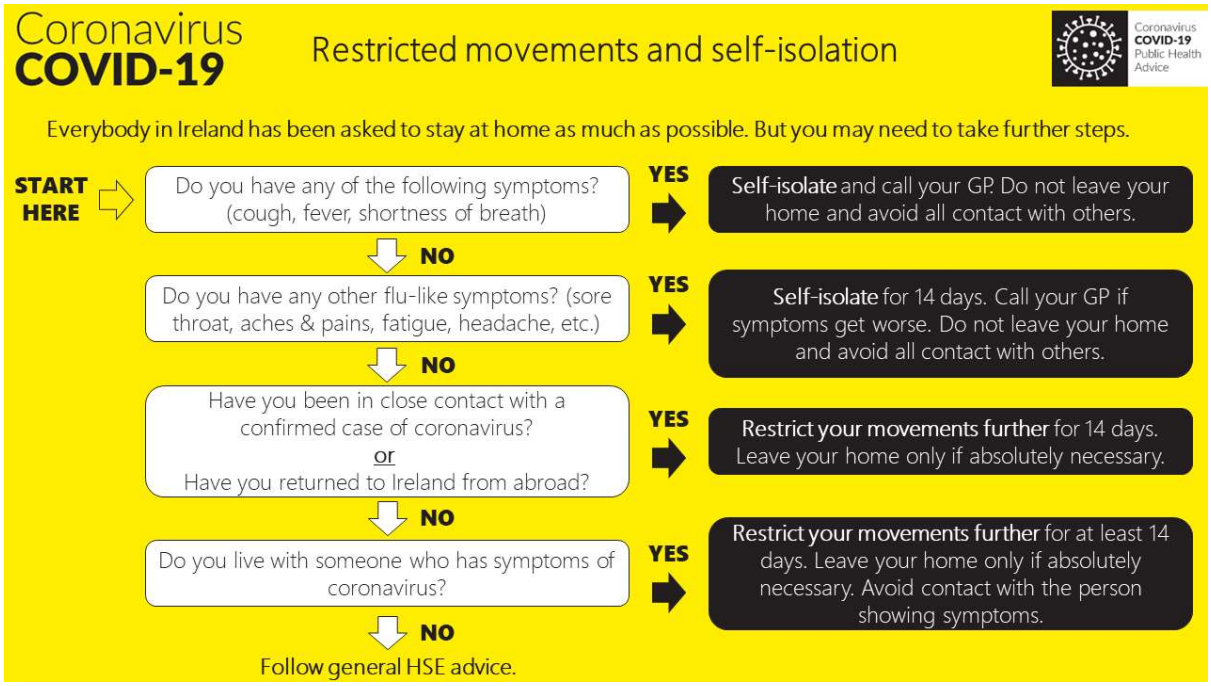
Control



Simple tree

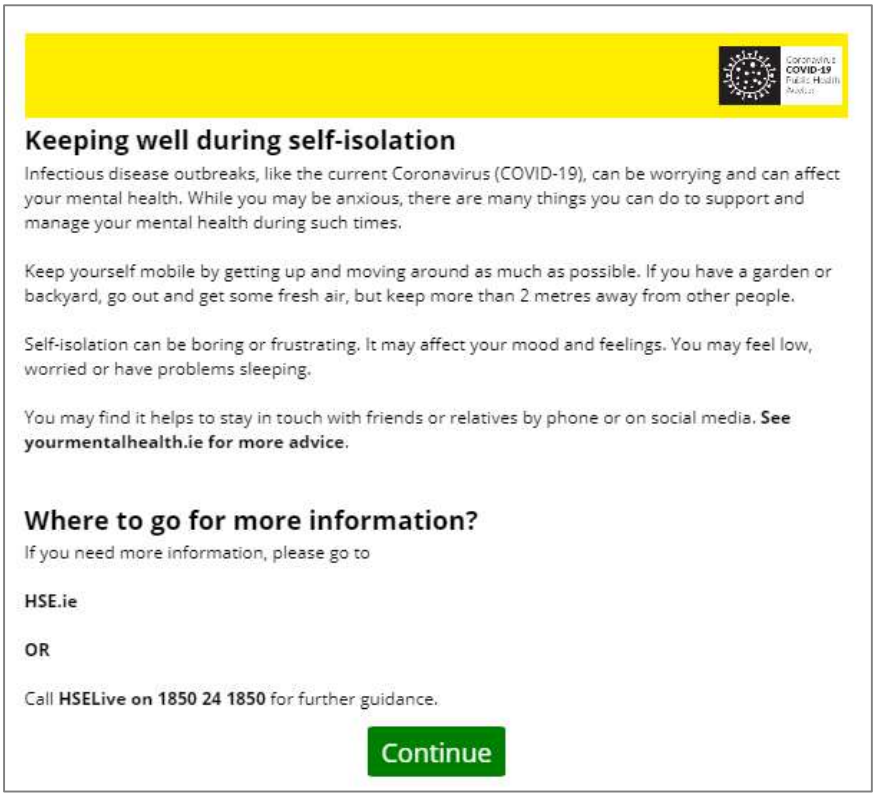


Complex tree



Appendix D – Material for Stage 2

Control



Keeping well during self-isolation

Infectious disease outbreaks, like the current Coronavirus (COVID-19), can be worrying and can affect your mental health. While you may be anxious, there are many things you can do to support and manage your mental health during such times.

Keep yourself mobile by getting up and moving around as much as possible. If you have a garden or backyard, go out and get some fresh air, but keep more than 2 metres away from other people.

Self-isolation can be boring or frustrating. It may affect your mood and feelings. You may feel low, worried or have problems sleeping.

You may find it helps to stay in touch with friends or relatives by phone or on social media. **See yourmentalhealth.ie for more advice**.

Where to go for more information?

If you need more information, please go to

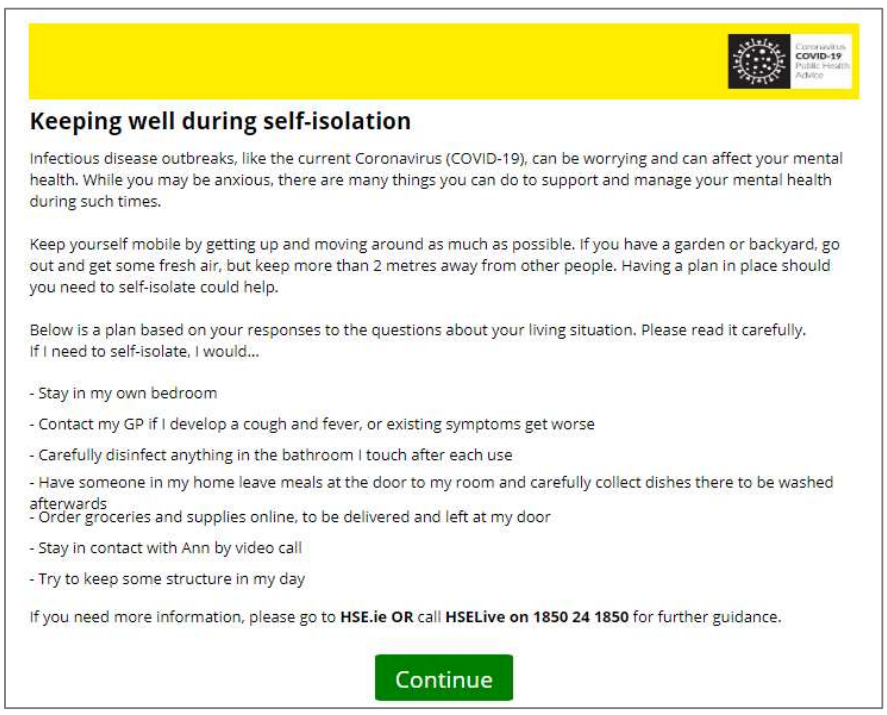
HSE.ie

OR

Call **HSELive on 1850 24 1850** for further guidance.

Continue

Plan



Keeping well during self-isolation

Infectious disease outbreaks, like the current Coronavirus (COVID-19), can be worrying and can affect your mental health. While you may be anxious, there are many things you can do to support and manage your mental health during such times.

Keep yourself mobile by getting up and moving around as much as possible. If you have a garden or backyard, go out and get some fresh air, but keep more than 2 metres away from other people. Having a plan in place should you need to self-isolate could help.

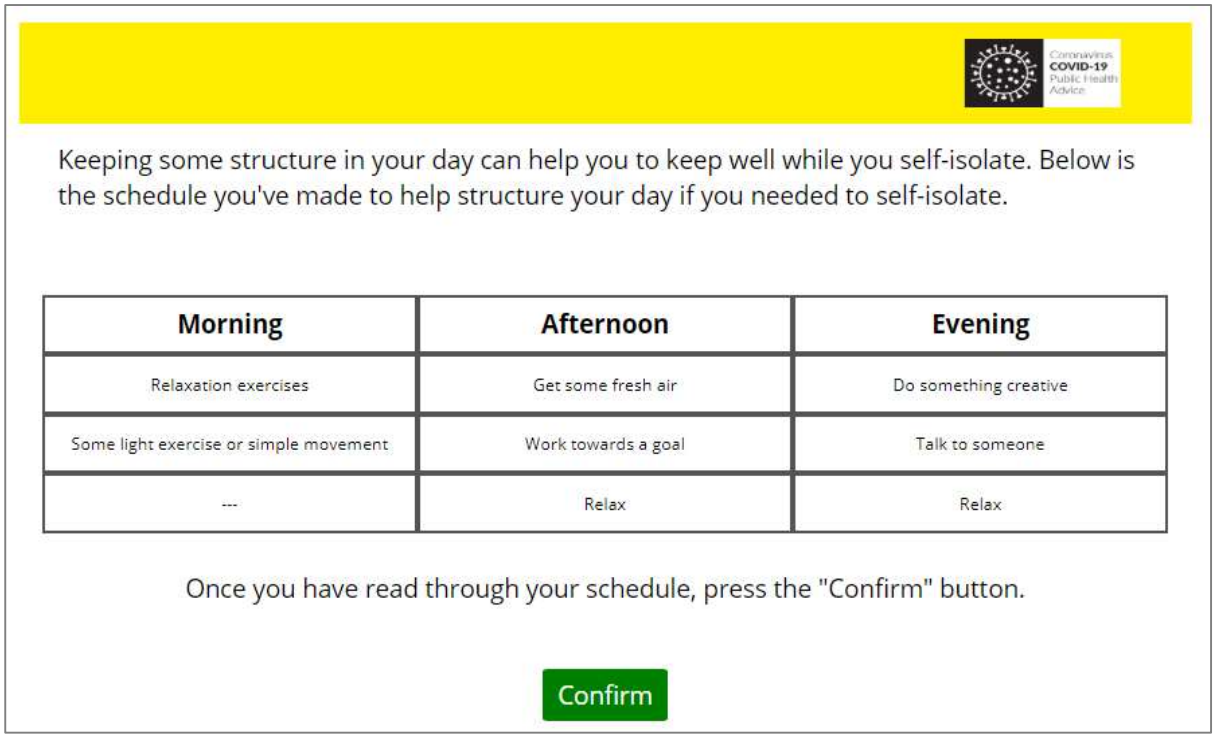
Below is a plan based on your responses to the questions about your living situation. Please read it carefully.
If I need to self-isolate, I would...

- Stay in my own bedroom
- Contact my GP if I develop a cough and fever, or existing symptoms get worse
- Carefully disinfect anything in the bathroom I touch after each use
- Have someone in my home leave meals at the door to my room and carefully collect dishes there to be washed afterwards
- Order groceries and supplies online, to be delivered and left at my door
- Stay in contact with Ann by video call
- Try to keep some structure in my day

If you need more information, please go to **HSE.ie OR** call **HSELive on 1850 24 1850** for further guidance.

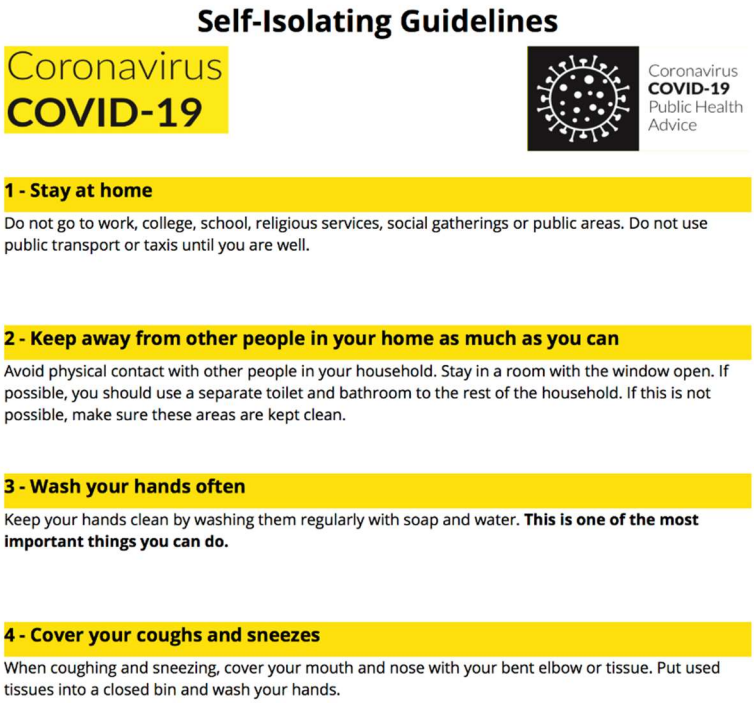
Continue

Plan and Routine (additional screen)



Appendix E – Material for Stage 3

Control: Page 1



Self-Isolating Guidelines

Coronavirus
COVID-19

Coronavirus
COVID-19
Public Health
Advice

1 - Stay at home

Do not go to work, college, school, religious services, social gatherings or public areas. Do not use public transport or taxis until you are well.

2 - Keep away from other people in your home as much as you can

Avoid physical contact with other people in your household. Stay in a room with the window open. If possible, you should use a separate toilet and bathroom to the rest of the household. If this is not possible, make sure these areas are kept clean.

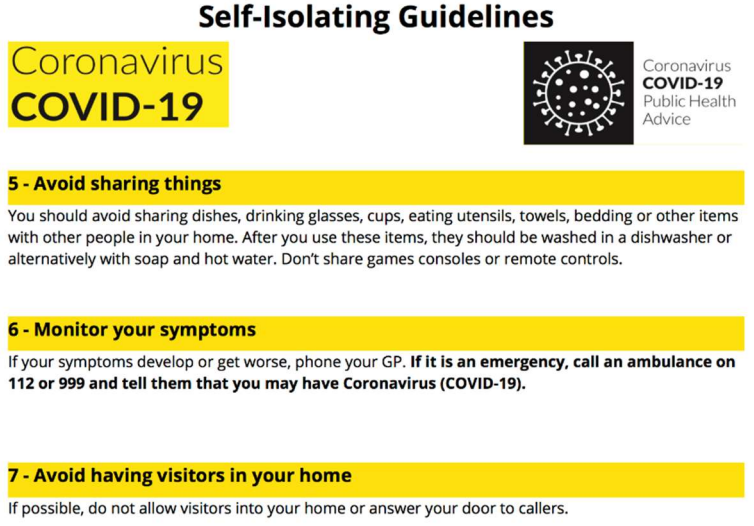
3 - Wash your hands often

Keep your hands clean by washing them regularly with soap and water. **This is one of the most important things you can do.**

4 - Cover your coughs and sneezes

When coughing and sneezing, cover your mouth and nose with your bent elbow or tissue. Put used tissues into a closed bin and wash your hands.

Control: Page 2



Self-Isolating Guidelines

Coronavirus
COVID-19

Coronavirus
COVID-19
Public Health
Advice

5 - Avoid sharing things

You should avoid sharing dishes, drinking glasses, cups, eating utensils, towels, bedding or other items with other people in your home. After you use these items, they should be washed in a dishwasher or alternatively with soap and hot water. Don't share games consoles or remote controls.

6 - Monitor your symptoms

If your symptoms develop or get worse, phone your GP. **If it is an emergency, call an ambulance on 112 or 999 and tell them that you may have Coronavirus (COVID-19).**

7 - Avoid having visitors in your home

If possible, do not allow visitors into your home or answer your door to callers.

Control: Page 3

Self-Isolating Guidelines

Coronavirus
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Coronavirus
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8 - Household cleaning

Many cleaning and disinfectant products sold in supermarkets can kill Coronavirus (COVID-19) on surfaces. Clean the surface as usual with a detergent, disinfectant or disinfectant wipe. Wear disposable gloves and a plastic apron if available and throw them out afterwards. Wash your hands after removing gloves and apron.

9 - Laundry

Wear gloves while handling dirty laundry and wash with detergent at a temperature above 60 degrees Celsius or at the highest temperature suitable for the fabric (whichever is higher). Clean all surfaces around the washing machine and wash hands thoroughly after handling dirty laundry.

10 - Managing rubbish

Use plastic bags for collecting rubbish including used tissues, gloves, masks and aprons. Dispose of rubbish bags when three-quarters full by tying the bag. Place the first bag in a second bag, which you should then also tie.

Infographic: Page 1

Coronavirus
COVID-19

Coronavirus
COVID-19
Public Health
Advice

Personal advice:
What should you do if you need to self-isolate?

1. Stay at home

- Do not go to work, college, school, religious services, social gatherings or public areas.
- Do not use public transport or taxis until you are well.

2. Wash your hands often

- Keep your hands clean by washing them regularly with soap and water.
- **This is one of the most important things you can do.**

3. Cover your coughs and sneezes

- When coughing and sneezing, cover your mouth and nose with your bent elbow or tissue.
- Put used tissues into a closed bin and wash your hands.

4. Monitor your symptoms

- If your symptoms develop or get worse, phone your GP.
- **If it is an emergency, call an ambulance on 112 or 999 and tell them that you may have Coronavirus (COVID-19).**

Infographic: Page 2

Infographic: Page 3

Appendix F – Multiple Choice Questions (MCQs)

1. Imagine the rubbish bin in your home is three-quarters full. Which of the following statements is true?
A. You should have disposed of your rubbish bag once it was half full
B. You should wait until your rubbish bin is full before disposing of it as it is
C. You should dispose of your rubbish bag now by tying the bag and placing it in a second bag*
D. You should wait until your rubbish bin is full and dispose of the bag by tying the bag and placing it in a second bag

2. If an item of clothing says fabric can be washed at a maximum of 75°C, what temperature should you wash it at?
A. 75°C*
B. 60°C
C. 40°C
D. It doesn't matter

3. One guideline specifically referred to three things that were suitable for cleaning surfaces. What were these three?
A. Detergent, disinfectant, or disinfectant wipes*
B. Soap, detergent, or wipes
C. Bleach, disinfectant, or soap
D. White spirit, disinfectant, or disinfectant wipes

4. If symptoms worsen but it is not an emergency, what should you do
A. Call 999 or 112
B. Call GP*
C. Call the test centre and arrange a test
D. Wait 14 days

5. Which of the following items should you not share?
A. Games consoles and remote controls*
B. Pots and pans
C. Hand sanitizers
D. You can share all of these

6. Which of the following is "one of the most important things you can do"?
A. Avoid having visitors in your home
B. Cover your coughs and sneezes
C. Monitor your symptoms
D. Wash your hands often*