Update on COVID-19 Behavioural Science Data, 28 June 2021

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This brief note provides analysis of recent behavioural data from the Amárach Tracking Survey (hereafter ATS) for the Department of Health and the Social Activity Measure (hereafter SAM), conducted by the ESRI’s Behavioural Research Unit (BRU) for the Department of the Taoiseach.

Please note that this is not a peer-reviewed ESRI research output, but a rapid examination of data in response to a specific request. The note is organised into two parts. Part A examines the vaccine rollout, while Part B deals with day-to-day behaviour. The findings are organised by research question (RQ), with a brief summary at the end of each part.

The research questions addressed are as follows:

Part A – Vaccine Rollout
RQ-A1: Is intention to take the vaccine rising or falling?
RQ-A2: How do intentions vary by vaccine type?
RQ-A3: What sources of advice and information on the vaccine do people trust?
RQ-A4: Do those not willing to accept the vaccine differently have different motivations than those who are willing?
RQ-A5: What reasons do people give for refusing the vaccine?
RQ-A6: How do the public view the success of the vaccine rollout?

Part B – Day-to-day Behaviour
RQ-B1: How many close contacts are occurring and in what locations?
RQ-B2: What proportion of close contacts are reported by people who are vaccinated?
RQ-B3: Is people’s day-to-day behaviour becoming less cautious?
RQ-B4: How many people plan to travel abroad?
RQ-B5: How has the lifting of restrictions affected wellbeing?
RQ-B6: What are public expectations for further lifting of restrictions?
Part A: Vaccine Rollout

RQ-A1: Is intention to take the vaccine rising or falling?

After a sequence of months in which the proportion of the population that intends to take the vaccine had steadily risen in all age-groups, there are now some signs that the (small) proportion who do not wish to take it may be rising.

Figure 1 shows vaccine intention among those yet to be vaccinated. It is important to understand that if people’s intentions do not change, as the vaccine rollout progresses the proportion of “no” or “unsure” responses will automatically climb, as vaccine hesitant individuals become a larger proportion of those yet to be vaccinated. Points to note:

• Until May, the proportion of those not vaccinated saying that they would take the vaccine actually went up, indicating that over time people who were initially vaccine hesitant were increasingly becoming to convinced to take the vaccine.
• In June, this did not continue: the proportion of those yet to be vaccinated saying that they will not take the vaccine has recently begun to rise
• Because we are measuring a small proportion of a subsample, the data are noisy and it is difficult to quantify this effect, but it can be seen in both sets of data.

An alternative way to view the data is to combine groups based on uptake and intention. Figure 2 groups people who have taken the vaccine with those who say that they will when it is offered, and people who have already refused the vaccine with those who will say that they will not take it. Figure 2 displays the trends in these combined categories, for the population as a whole and separately for the under-40s who will be the focus of the next phases of the rollout. Points to note:

• Intentions towards the vaccine have become increasingly positive since January.
• Approximately 10% of the population who were unsure either took the vaccine when offered it or now say that they will take the vaccine when offered it.
• In general, younger adults are less positive about taking the vaccine.
• There was also a fall between January and May in the proportion saying that they would not take it.
• In June, there appears to have been something of a reversal, with a modest increase in the proportion saying that they will not take the vaccine.
Figure 1. Vaccine intention among those not yet vaccinated. A swing towards non-acceptance is to be expected as the vaccine is made available to more people, because the analysis excludes increasing numbers who have already taken it. The absence of this swing from January to June indicates that vaccine acceptance increased. This trend has ceased, however. In June the proportion of those yet to be vaccinated who say that they will not take the vaccine has gone up.
Figure 2. Vaccine uptake and intention combined. Top charts show proportion of the population and those aged 18-39 who have either already taken the vaccine or say that they will when offered it. Bottom charts show those who have already refused the vaccine or say they will not take it, as well as those who are unsure. There has been a modest reversal in June of the positive trend apparent from January to May. Data from SAM

RQ-A2: How do intentions vary by vaccine type?

Almost 1-in-5 (19%) people yet to take the vaccine say that whether they will take it depends on which vaccine they are offered. Another 30% say that they will take whatever vaccine they are offered, but that they have a preference.

Figure 3 shows the percentage willing to take each type of vaccine, of the group who say that taking the vaccine is conditional on which one they are offered. Points to note:
• Pfizer is by some distance the most popular vaccine
• Astra Zeneca is by some distance the least popular
• This pattern is stable across multiple waves of the SAM study

Figure 3. Proportion willing to take each type of vaccine, of those who say that taking the vaccine depends on which type they are offered. Data from SAM.

RQ-A3: What sources of advice and information on the vaccine do people trust?

Health professionals and government sources have moderate levels of trust, but the pattern differs greatly by vaccine intention.

The ATS asks a question about trust in different potential sources of advice about the vaccine. By contrast, SAM asks a question about trust in different potential sources of information about the vaccine. Both ask about a range of different health service professionals and government organisations. SAM also asks about media and personal sources. Figure 4 shows the breakdown of responses to these two questions. Points to note:

• No one source can be considered strongly trusted by the population in general – substantive minorities do not trust even the sources with the highest scores.
• GPs are largely trusted for both advice and information.
• Trust in other health professionals, including pharmacists, is lower.
• Around half the population trust government advice.
• About two-thirds of the population trust Government websites for information, but trust in Government adverts is much lower.
• There is only moderate trust in mainstream media to provide information (radio and newspapers are not shown, but trust in both is slightly lower than TV).
• There is little trust in social media to provide information.
• There is also little trust in friends and family.

![ATS - Trust to give advice?](image1)

![SAM - Trust for information?](image2)

Figure 4. Levels of trust in different sources to give advice (ATS, June) and to provide information (SAM, May and June).

One reason for the rather modest overall levels of trust in multiple sources is that trust in these sources varies greatly by vaccine acceptance. Figure 5 displays this relationship for trust in sources to provide information. Points to note:

• Trust in information provided by health professionals (including GPs), Government and mainstream media (TV shown, but similar for radio and newspapers) is very much lower among people who are vaccine hesitant.

• People who are vaccine hesitant are somewhat more likely to trust articles shared on social media, friends and family, and “other” sources, but are in general not very trusting of any sources of information.
RQ-A4: Do those not willing to accept the vaccine differently have different motivations than those who are willing?

Yes. Those who are not willing to take the vaccine place substantially less weight on protecting themselves and others from illness and more weight on life returning to normal.

SAM asks what is more important to people when thinking about the effects of the COVID-19 vaccine generally, protecting yourself/others from getting ill from COVID-19 or resuming normal life. Figure 6 shows how this varies by willingness to take the vaccine. Points to note:

- For the majority who have already taken or intend to take the vaccine, protection of self and others is the priority
• For the minority who have already refused or intend to refuse the vaccine, protection of self and others is the priority comes second to getting back to normal.

Figure 6. What is more important to people when thinking about the vaccine, by willingness to take it. Data from SAM (May and June).

RQ-A5: What reasons do people give for refusing the vaccine?

Approximately 60% of those who have refused the vaccine provide a rationale that references lack of good research behind the vaccine, the danger of long-term side effects, or excessive speed of development.

An open text question in SAM does ask those who have refused the vaccine for a reason. Given the high level of acceptance, the sample of respondents who have refused the vaccine is very low, so it is not possible to provide a breakdown of different rationales. However, it is clear that the above reasons occur in the majority of statements. Other factors that are less commonly mentioned include concerns about messing with genetics, pregnancy and fertility, and people believing that they have a strong enough natural immune system without needing the vaccine.

RQ-A6: How do the public view the success of the vaccine rollout?

Satisfaction has increased overall as the rollout has progressed, but has now begun to fall in older age categories.

Since the beginning of May, SAM has measured satisfaction in the vaccine rollout using a response scale (1=very frustrated; 7=very satisfied). Figure 7 shows the mean score for the population as a whole and for separately for six age categories. Points to note:
• Overall, mean satisfaction has risen significantly from around the midpoint of the scale (4.0) to above it.
• This overall increase has levelled off during June.
• Satisfaction is higher in older age groups.
• However, there has been a statistically significant fall in satisfaction among the two oldest groups (over-60s) in the latter half of June.
• Satisfaction continues to rise among younger groups.

Figure 7. Mean satisfaction with the vaccine rollout, measured on a 7-point scale (1=very frustrated; 7=very satisfied), for the population as a whole and separately by age group. Data from SAM.

There is more than one possible explanation for these trends. Uncertainty about the efficacy of the vaccine against variants might play a role for older groups, while the rapid acceleration of the vaccine programme may remain the dominant factor for younger groups. The delay between doses of the Astra Zeneca vaccine could be a factor, although this ought to affect the 60-70 group more than the 70+ group. We have no way to test these possibilities with the available data.

Part A Summary and Implications

The modest increase in vaccine hesitancy in June must be put against the backdrop of increasing vaccine acceptance from January to May. However, it is a concern and it would be useful to be able to explain this change in the positive trend. One possibility is that it is linked to the focus on the
Delta variant. We know from the previous ESRI/DOH study on vaccine hesitancy that people who are vaccine hesitant or resistant are far less knowledgeable about the vaccines and do not perceive their benefits; in simple terms, they do not acknowledge that the vaccines work. This view may have been strengthened by hearing about the variant.

We have no way to test whether this explains the trend in June, but the perception among a minority that the vaccines are not effective is also consistent with hesitant individuals expressing less motive to protect themselves and others through the vaccine. Continuing to emphasise how well the vaccines work, even in the face of variants, is in keeping with evidence on combatting hesitancy. Since hesitant people are far less trusting of official information and those who refuse do not trust the vaccine research, trying to locate narrative stories and specific examples that speak to the effectiveness of the vaccines may be beneficial.

One difficulty for communications is that the ESRI/DOH paper also shows that individuals who are resistant or hesitant and are far less likely to follow the news about Covid-19 than individuals who are willing to take the vaccine. The evidence above compounds this problem, because it suggests that they do not, in any case, trust information in the media or from government. It is perhaps surprising how little they are also willing to trust health professionals. Less than one quarter say they will trust advice from their GP. This implies the need for a strategy of trying to find alternative, non-official messengers to spread positive news about the effectiveness and safety of the vaccines.

The finding that nearly one-in-five people who have not yet received a vaccine say that whether they will take it depends on the type offered, coupled with a strong preference for the Pfizer vaccine (and contra Astra Zeneca), implies that levels take-up may be affected by the availability of specific vaccine types. The “take whichever vaccine you are offered” message over the last two months has not altered what is a very consistent pattern in the data on preferences for vaccine type.

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Part B: Day-to-day Behaviour

RQ-B1: How many close contacts are occurring and in what locations?

SAM estimates that 30% of the population is having a close contact with at least one other person from another household each day, mostly in homes.

Figure 8 shows the trend in close contacts, based on detailed descriptions of respondents’ activities the previous day, as gathered in the SAM study. The headlines data are then broken down by location. Points to note:

- Close contacts in a 24-hour period have doubled since the beginning of March.
- Half of all close contacts take place during visits to homes, accounting for the majority of close contacts where masks are not worn.
- The further increase in close contacts without masks during June was associated with the reopening of hospitality.
- Aside from hospitality, the incidence of close contacts in other indoor locations has been fairly flat over the past month.

Figure 8. Proportion of individuals who had a close contact with at least one person from another household the previous day, by location, with and without masks. Close contact interactions are defined as those that lasted longer than 15 minutes without a 2m distance being maintained at all times or that took place indoors for longer than 2 hours in a space that was not well ventilated.

Data from SAM.
RQ-B2: What proportion of close contacts are reported by people who are vaccinated?

The majority of close contacts are now reported by individuals who have received at least one dose of vaccine, although many of these people have had only one dose.

Figure 9 replots the trend in close contacts broken down by whether the individual reporting the close contact has been vaccinated, including whether they have received one or two doses. Points to note:

- Since the beginning of May, the incidence of close contacts reported by people who are not vaccinated has fallen steadily.
- More close contacts are now reported by individuals who have received at least one dose.
- The relative trends suggest that many people change their behaviour after a single dose, although the increase is steeper after two doses.

![Figure 9. Trend in close contacts by vaccination status. Data from SAM.](image-url)

SAM also tracks the total number of people from other households that an individual meets up with and how often they engage in social home visits. The majority of meetings and home visits are now reported by vaccinated people, with the incidence of meetings and visits reported by unvaccinated people falling.

RQ-B3: Is people’s day-today behaviour becoming less cautious?

Yes, there is a decline in how often people are maintaining distance, wearing masks and cleaning hands.
SAM asks respondents about their actions when visiting each location outside of their home. For each visit to a location it records whether people report keeping 2m distance, wearing a mask, and cleaning their hands. We categorise these responses into an overall level of caution according to the proportion of the time that individuals “do the right thing”. Figure 10 plots the trend in caution since the start of April, when restrictions began to be lifted. Points to note:

- Less than half the population consistently keep their distance, wear a mask and wash their hands when visiting a location outside of their home.
- There has been a steady fall in cautious behaviour over the past three months.

![Figure 10. Level of caution in everyday behaviour. Caution is defined by how often, when visiting each location outside of their home, people report keeping 2m distance, wearing a mask, and cleaning their hands. Data from SAM.](image)

The ATS data on wearing of masks in public places shows a similar decline, with the proportion reporting wearing masks falling from 93% to 85% between March and June.

**RQ-B4: How many people plan to travel abroad?**

Less than 10% of the population plans to travel abroad before the end of August.

Figure 11 shows the proportion of the population that plans foreign travel and those who have booked their travel. Points to note:

- Less than 10% have planned travel during July or August.
• Less than half those who have plans have booked.
• 70% have nothing planned at all.

Figure 11. Proportions of individuals who have planned and booked foreign travel during the coming months. Data from SAM.

RQ-B5: How has the lifting of restrictions affected wellbeing?

Wellbeing has improved substantially as restrictions have opened, with strong differences by age.

Figure 12 plots responses to simple question about how people rate their own mental wellbeing on a 7-point scale (1=very poor; 7=very good). (Note that responses on such simple response scales are indicative; low scores correlate with mental health diagnoses, mental health assessments by third-parties, and suicidal tendencies). Points to note:

• Wellbeing is very much lower among younger adults.
• The extension of Level 5 had a disproportionate impact on those under 40, with more than 1-in-3 reporting low wellbeing.
• More than one quarter of adults under 40 continue to report low wellbeing.
Figure 12. Trends in reported wellbeing by age group. Left chart shows mean score on a 7-point scale (1=very poor; 7=very good). Right chart shows proportion responding with scores below the midpoint of 4. Data from SAM.

RQ-B6: What are public expectations for further lifting of restrictions?

As of June 22\textsuperscript{nd}, the large majority of the public expected restrictions to be further eased during July.

Figure 13 charts responses from multiple rounds of SAM, in answer to a direct question about what people expect to happen to restrictions the following month. Points to note:

- Over 70\% of the population expect restrictions to be eased further during July
- This has decreased slightly, with a minority now expecting no change during July
Figure 13. Expectations for changes in restrictions the following month. Data from SAM.

Given the news coverage even in the short time since these data were gathered, however, it is quite possible that expectations will have continued to change.

Part B Summary and Implications

In the current context, where the threat from the Delta variant may delay planned lifting of restrictions, there remains scope for more cautious everyday behaviour to contribute to reducing the risk.

The fact that the majority of close contacts without masks take place during visits to other people’s homes suggests that more social activity could be taking place in outdoor locations away from homes, especially given the Summer weather. Further encouragement for getting outdoors to meet people may be effective, perhaps specifically linked to the risk of the Delta variant and the danger that restrictions will have to remain in place.

Even though the contribution of hospitality to close contacts without masks is small, it is growing and is likely to continue to do so, especially if indoor hospitality reopens. Figure 8 above shows that close contacts in other indoor locations (e.g. churches, workplaces, homes) have been stable over
recent weeks. Based on the data above, the further opening of indoor hospitality is likely to increase the incidence of indoor close contacts without masks relative to what otherwise would take place.

There is evidence that the amount of risk individuals take does change somewhat after a single dose of vaccine. There may be further scope for trying to persuade people to delay increasing their social activity a little longer until they have received the second dose.

The wellbeing data presented in this note are stark. The wellbeing of young adults, in particular, appears to be strongly affected by restrictions and remains low, although it has improved since restrictions began to lift. It is, therefore, likely that there would be a psychological as well as economic cost to delaying lifting restrictions.

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