

Public experiences of Test, Trace, Protect (TTP) in Wales

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Research**

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TOP-LINE SUMMARY

Key findings

- Experience of Test, Trace, Protect Service (TTPs): Participants' experience of TTPs was variable. There was considerable variation in the time taken for TTPs to contact individuals from the time of presumed exposure (33% within one day and 64% within 3 days, 36% 4 days or more). There was also considerable variation in terms of the frequency of follow-up contact (e.g. 25% daily contact versus 50% no further contact).
- Views on TTPs: Participants' satisfaction with TTPs was mixed. Overall, roughly half (48%) were satisfied with their experience of TTPs, compared to little over one-third (36%) who were dissatisfied. Roughly half of the survey respondents were satisfied with the ability of TTPs to answer their questions (54%). Most participants felt the advice from TTP was clear (70%) and easy to carry out (76%)
- Adherence: Reported adherence to self-isolation guidance was high, with 80% of survey respondents reporting having fully isolated and only 1% suggesting they didn't isolate at all. Most commonly reported challenges to self-isolation were: physical health challenges (e.g. lack of exercise, unusual aches and pains etc.) (46%), mental health challenges (e.g. anxiety, feeling down, loneliness etc.) (46%), adjusting to usual daily routine (34%). Although not as common, important challenges which may require some self-isolators to be provided with additional support included lack of access to essentials (20%), care commitment challenges (14%) and financial challenges (12%).
- Self-isolation support scheme: Very few survey respondents (8%) were informed about the self-isolation support scheme by TTP contact tracers. Just over half (53%) didn't know about it at all. Just under one-in-four (27%) felt that their income was negatively affected by having to self-isolate (of which, one-in-ten (10%) strongly agreed that it had).
- Mental health: One of the main challenges' participants experienced was the mental health impacts of self-isolation. Three-quarters of survey respondents (75%) did not have their emotional or mental wellbeing checked on by TTP contact tracers. Over half (53%) felt that they would have liked more information about support for their mental health while self-isolating

Key recommendations

- **Recommendation 1:** TTPs should ensure greater consistency in communications between contact tracers and those being asked to self-isolate, for example in terms of time-to-contact (consistently low, ideally within 1-2 days) and in terms of the frequency of subsequent contacts (consistently high, ideally daily).
- **Recommendation 2:** TTPs should consistently ensure that *all* those required to self-isolate are asked about their financial situation and, where relevant, provided specific information support for applying for self-isolation payments or other forms of financial assistance.
- **Recommendation 3:** TTPs should consistently enquire into the mental and emotional wellbeing of *all* those asked to self-isolate and should provide resources and links for available and relevant mental health support.
- **Recommendation 4:** People who do *not* feel they have the capability, opportunity or motivation to adhere to self-isolation need to be systematically identified and provided with support resources to help them adhere.

BACKGROUND

The Test, Trace, Protect Strategy forms part of the Welsh Government's Leading Wales out of the Coronavirus Pandemic Framework.¹ The strategy involves community health surveillance and contact tracing, with a view to identifying and supporting those requiring self-isolation in order to mitigate the transmission of coronavirus in Wales.² Current guidance suggests that people should self-isolate for ten days if: they develop symptoms; they have tested positive for Covid-19 (even without symptoms); they live with someone, or someone from their extended household has developed symptoms or tested positive; or they have been contacted by the TTP service and told to self-isolate (as a result of being in contact with someone who has tested positive).³

A rapid review of the wider (pre-Covid-19) literature on adherence to quarantine found that adherence decisions were associated with people's knowledge of the disease and quarantine measures (e.g. clear instructions), social norms (e.g. around 'civic duty'); high perceived benefits of quarantine and high perceived risk of the disease, as well as practical issues such as running out of supplies or the financial consequences of being out of work.⁴ Research findings in relation to the current coronavirus pandemic in the UK match this earlier literature on adherence.

Earlier in the COVID-19 pandemic (between March-September), complete adherence to self-isolation guidelines was low for both those with Covid-19 symptoms (18.2%) and for

¹ <https://gov.wales/leading-wales-out-coronavirus-pandemic>

² <https://gov.wales/test-trace-protect-coronavirus>

³ <https://gov.wales/self-isolation>

⁴ [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30460-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30460-8/fulltext)

those contacted by contact tracers (10.9%).⁵ Non-adherence with symptoms was associated with: being male, being in a younger age groups, having a dependent child in the household, being in a lower socio-economic group, experiencing greater hardship during the pandemic and being a key worker.⁵

However, more recent data (released January, 2021) suggests that younger adults (aged 18-59) are more likely to isolate for longer compared to older adults (aged 60+), and that there was no significant difference between men and women.⁶ Overall, the COVID Social Study survey found that 4 out of 5 people are isolating for at least the recommended number of days (10 or more) when they are told they have come into contact with someone who has symptoms of Covid-19 (Fancourt et al 2021). They also found that less than 2 in 3 isolated for 10 days or more when they themselves had symptoms of Covid-19.⁶

However, this research does not explore differences between those who had confirmed positive tests for Covid-19, and those who had symptoms but no confirmed positive test. It is possible for example that a higher proportion of non-adherence is amongst those who had not tested positive and who believed their symptoms may have been due to a non-Covid illness. It may also be due to the fact that whereas self-isolating following a confirmed positive test or following instruction from NHS contact tracers is a legal requirement, self-isolating following the onset of Covid-19 like symptoms, prior to or in the absence of a test, is not.

Those in a lower income group are less likely to self-isolate for the recommended length of time and are much more likely not to isolate at all.⁶ Research on other countries suggests that those from lower or less stable incomes backgrounds may lack the practical capacities to adhere.^{7,8} It may be that some, particularly those in low-paid occupations, are reluctant to take Covid-19 tests when experiencing possible symptoms for fear of a positive test and the loss of income that self-isolation might entail.⁹

Large, longitudinal surveys provide an important overview of the broad patterns of adherence to self-isolation. However, further research is necessary to explore the nuances behind adherence and non-adherence to self-isolation. For example, binary measures looking at whether participants did or did not leave home do not distinguish between those who may have left the home frequently and visited potentially higher-contact indoor environments (e.g. shops, certain workplaces) compared to those who left the home once or infrequently and visited likely lower-contact outdoor environments (e.g. parks for exercise). Similarly, it is important to know whether those who state they isolated for 10 days or more were fully isolated during that time and whether those who state they self-isolated for 1-5 days were still partially isolated or whether they returned to general guidelines. In this mixed-methods study, we explore in depth adherence to self-isolation in Wales. Qualitative research is used to explore some of these nuances around how participants understand self-isolation and adherence, with quantitative research exploring specific behaviours associated with self-isolation. We also explore participants' views and experiences of the Test, Trace, Protect

⁵ <https://www.medrxiv.org/content/10.1101/2020.09.15.20191957v1.article-info>

⁶ https://b6bdc03-332c-4ff9-8b9d-28f9c957493a.filesusr.com/ugd/3d9db5_bf013154aed5484b970c0cf84ff109e9.pdf

⁷ <https://www.healthaffairs.org/doi/10.1377/hlthaff.2020.00382>

⁸ https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3598215

⁹ <https://www.theguardian.com/society/2021/jan/16/low-paid-shun-covid-tests-cost-of-self-isolating-too-high>

service in Wales. Specifically, we aim to explore the extent to which they found the service to be effective (for example, whether they found the advice to be clear), the extent to which they were able to follow the advice given, and what challenges and supports to self-isolation they experienced and received or might have liked or needed.

METHODS

Design

We conducted a cross-sectional mixed methods study, combining quantitative questionnaires with qualitative interviews conducted in December 2020 and January 2021. Ethical approval for the study was granted by Swansea University’s School of Management Research Ethics Committee and Swansea University’s College of Human and Health Sciences Research Ethics Committee.

Participants

Eligibility criteria for this study were (1) Living in Wales; (2) Aged 18 or older; (3) To have been contacted by Test, Trace, Protect (TTP) during the pandemic and have been told to self-isolate (either because they tested positive for Covid-19, or because they were told they had been in contact with someone who had tested positive for Covid-19). Sampling for the study was non-probability, combining convenience and snowball sampling approaches.

Recruitment took place primarily via social media. This included: targeted paid-for Facebook ads (adults in Wales); targeted posts in Facebook community groups (including both general community groups focused on local issues, and specifically local coronavirus support and information groups); and via Twitter networks (e.g. re-tweets). A formal press release was also publicised by Swansea University in order to boost recruitment. Interview participants were compensated for their time with a £10 gift card (Amazon). Survey respondents completed the survey voluntarily. Informed consent for interviews and surveys was provided. As of 26th January 2021, 14 interviews had been conducted and the survey had received 78 responses. Participants’ demographic characteristics for the total survey sample and interviews are reported below (Tables 1-3) (all survey questions were optional and response totals for each question are provided within the results). Data collection is ongoing.

Characteristics	N = 120
Gender	
Male	28 (23%)
Female	90 (75%)
Prefer not to say	2 (2%)
Ethnic group	
White	111 (93%)
BAME	9 (7%)
Age	
18-29	25 (21%)
30-39	28 (23%)

40-49	25 (21%)
50-59	30 (25%)
60-69	10 (8%)
Living status	
Alone	14 (12%)
With friends or parents	15 (14%)
With partner	32 (24%)
With partner and children	43 (42%)
With children	9 (8%)
County	
Blaenau Gwent	5 (4%)
Caerphilly	6 (5%)
Monmouthshire	1 (1%)
Newport	7 (6%)
Torfaen	4 (1%)
Wrexham	1 (1%)
Conwy	1 (1%)
Cardiff	11 (9%)
Vale of Glamorgan	3 (3%)
Bridgend	4 (3%)
Merthyr Tydfil	1 (1%)
Rhondda Cynon Taf	11 (9%)
Carmarthenshire	4 (3%)
Ceredigion	2 (1%)
Pembrokeshire	3 (3%)
Powys	3 (3%)
Neath Port Talbot	9 (8%)
Swansea	44 (37%)

Table 1: Demographic characteristics reported by survey respondents

Question	N = 121
<i>Have you been contacted by TTP?</i>	
Yes, by phone	75 (62%)
Yes, I was told to isolate by the app	25 (21%)
No	15 (12%)
Maybe, I'm not sure	6 (5%)
<i>Why were you contacted by TTP?</i>	N = 103
I had a positive Covid test	28 (27%)
I was in contact with someone who tested positive for Covid	62 (60%)
Other/not sure	11 (11%)

Table 2: Details of survey respondents' TTP contact

Characteristics	N = 14
Gender	
Male	5 (36%)
Female	9 (64%)
Ethnic group	
White	13 (93%)
BAME	1 (7%)
Age	

18-29	4 (29%)
30-39	3 (22%)
40-49	2 (14%)
50-59	2 (14%)
60+	2 (14%)
Did not say	1 (7%)

Table 3: Demographic characteristics of interviewees

Data collection and analysis

Interviews were semi-structured and conducted by SW, and the interview schedule was designed by SW and PW. Interviews lasted between 30 minutes and 1 hour in length, were conducted either via phone or online (Zoom) and were audio recorded and transcribed. Interviews sought to initially explore: participants' encounters and experience with TTP (e.g. 'tell me about your experience with TT'); participants' self-reported adherence and their understandings (e.g. 'did you stick to the guidance; what did this involve?'); participants' views on perceived barriers and facilitators to adherence to self-isolation (e.g. 'were there any things that made self-isolating challenging?', 'were there any things that helped you self-isolate?'). Interview data were analysed in accordance with a framework approach.¹⁰ SW and KD analysed the transcripts and developed and applied the thematic coding framework.

The survey was administered via Qualtrics.¹¹ The survey included: Basic background demographics (5 items); questions focused on the TTP service and on adherence to self-isolation (e.g. how frequently they were contacted, whether they self-isolated) (6 items); questions concerning respondents' perceptions of their capabilities, opportunities, and motivations to adhere to self-isolation guidance (adapted from the COM-B Questionnaire)¹² (9 items), and perceptions of TTP derived from focus group findings (10 items). COM-B questions are on an 11-point scale from 0-10, with 0 being "not at all" and 10 being "very much so". An example question is: "I had the PHYSICAL opportunity to self-isolate. What is physical opportunity? The environment provides the opportunity to engage in the activity concerned (e.g. sufficient time, the necessary materials/resources, reminders)". Relevant survey questions are reported with data in the results section along with response category frequencies and descriptive statistics. All data was kept securely and confidentially in line with ethics committee requirements in order to protect participants' identities.

RESULTS

Participants experiences of the Test, Trace, Protect Service

Participants' experiences of TTPs was variable. There was considerable variation in the time taken for TTPs to contact participants from the time of presumed exposure (e.g. 33% within

¹⁰ <https://bmcmedresmethodol.biomedcentral.com/articles/10.1186/1471-2288-13-117>

¹¹ https://swanseachhs.eu.qualtrics.com/jfe/form/SV_07HhIFNqXTxlnOR

¹² <https://www.nature.com/articles/s41562-020-0887-9>

one day and 64% within 3 days, versus 36% 4 days or more; N = 94) (Figure 2). There was also considerable variation in terms of the frequency of follow-up contact (e.g. 25% daily contact versus 50% no further contact; N =102) (Figure 3).

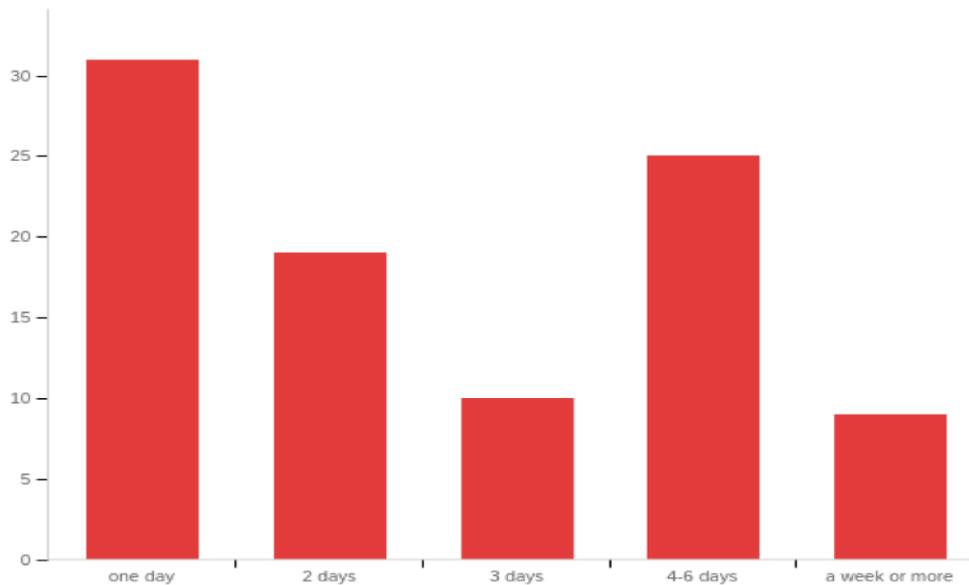


Figure 2.: How long did it take for TTP to contact you (Y axis: number of people)

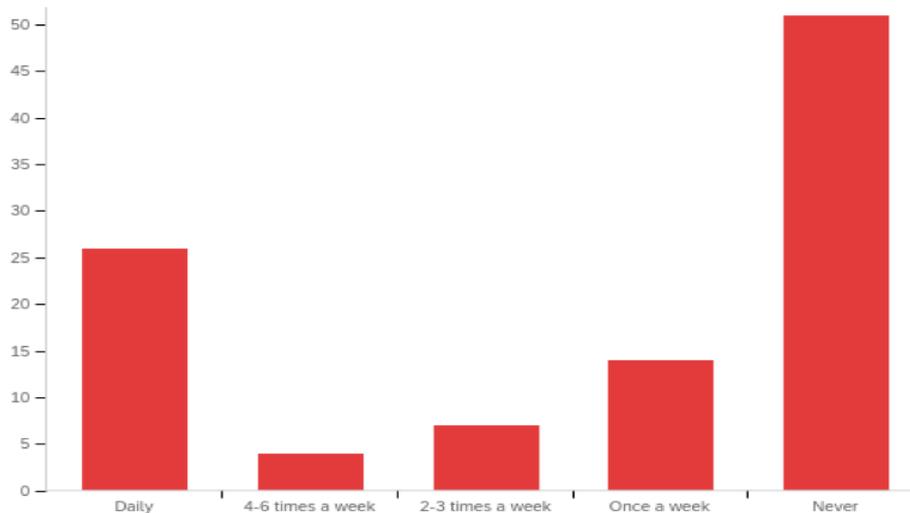


Figure 3.: How often were you contacted after the initial call (Y axis: number of people)

Participants views of the Test, Trace, Protect Service

Participants’ satisfaction with TTPs was mixed. Overall, roughly half (48%) were satisfied with their experience of TTPs, compared to a little over one-third (36%) who were dissatisfied (Figure 4). Roughly half of the participants were satisfied with the ability of TTPs to answer their questions (54%). Most participants felt the advice from TTP was clear (70%, N=98) and easy to carry out (76%, (N = 97); Figures 5 and 6).

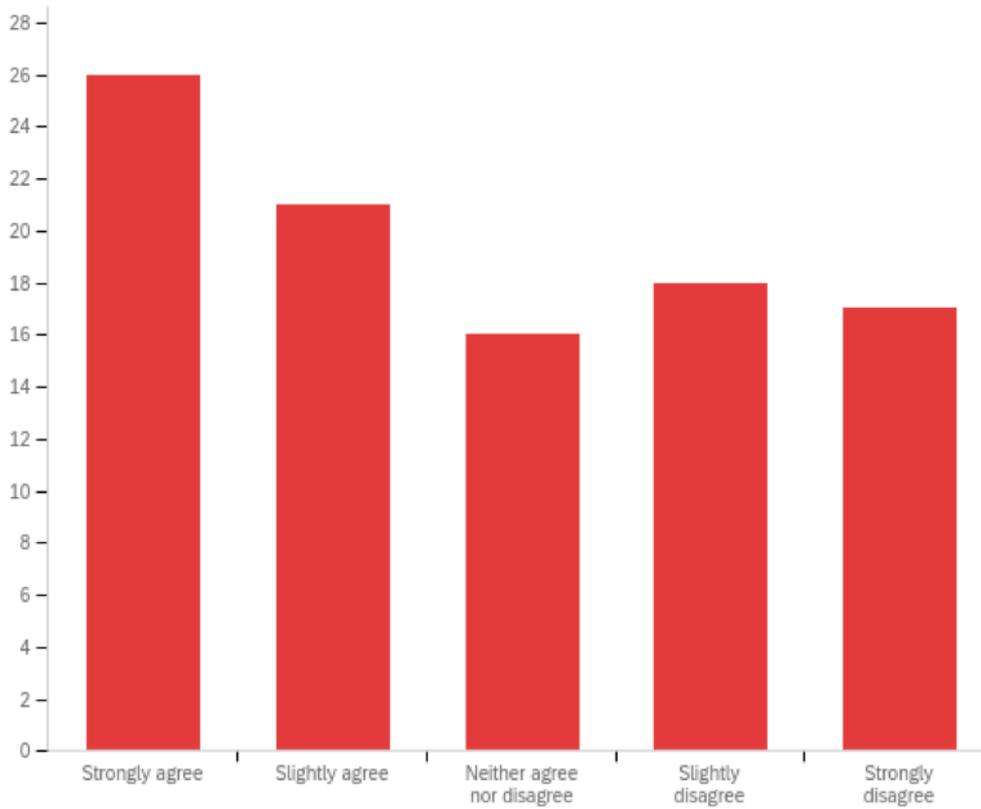


Figure 4.: Overall, I was satisfied with my experience with Test, Trace and Protect (Y axis: number of people).

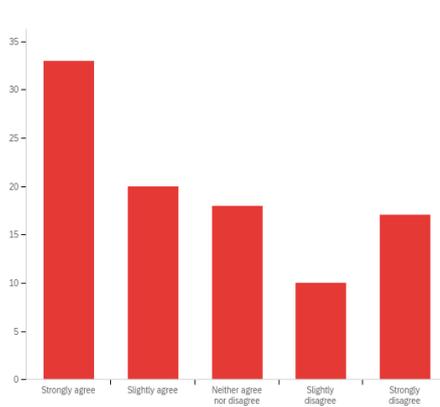


Figure 5: I was satisfied with the ability of my Test, Trace and Protect contact to answer my questions (Y axis: number of people)

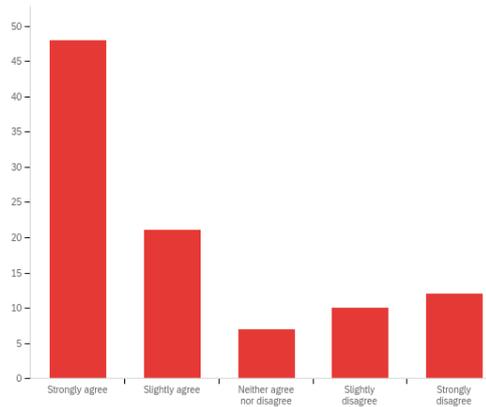


Figure 6: The advice from Test Trace Protect was clear (Y axis: number of people)

Adherence

Overall, adherence to self-isolation among survey respondents was high, with 80% of participants reporting having fully isolated and only 1% suggesting they didn't isolate at all (N = 96; Figure 7).

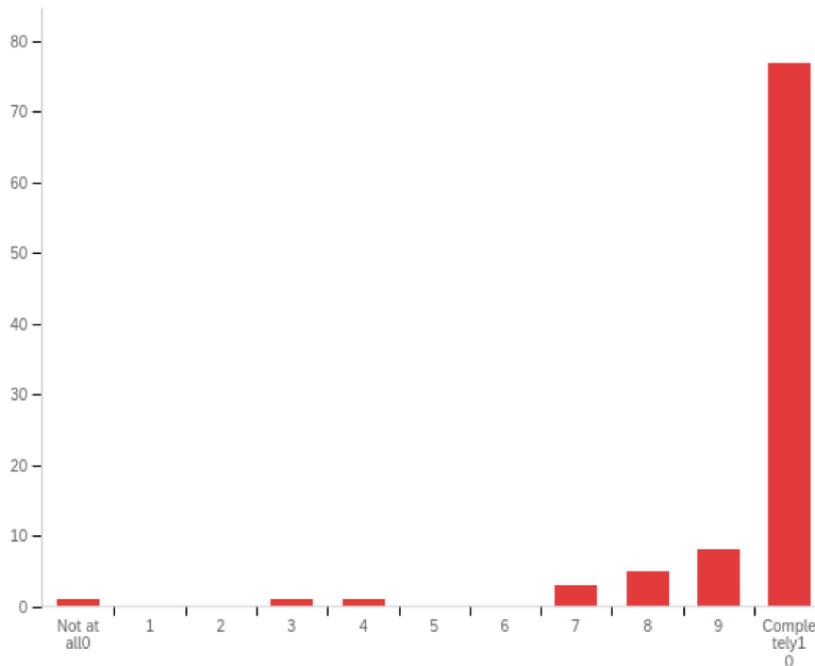


Figure 7: How closely did you follow Test, Trace, Protect's Instructions to self-isolate (Y-axis: number of people)

Qualitative data from the survey (Box 1) and interviews found a number of different understandings and experiences of what self-isolation meant to participants, and there was variety in the extent to which they actually followed official rules. For some, the self-isolation period entailed staying at home entirely and even avoiding contact with those inside their household, while others had a much looser interpretation. One of the most common reasons for non-adherence was to exercise, and this varied from brief once per day exercise during the later stages of self-isolation to long periods of exercise during the self-isolation period. However, amongst those who did leave the house for exercise, participants generally reported taking risk-management ('harm-reduction') steps to minimize the likelihood of infecting others (e.g. going to remote locations, going very early in the morning). People also found it difficult to adhere to guidance (rather than rules) on self-isolating within the household. This may link, as discussed below, to the fact that some participants reported receiving guidance on how to self-isolate within the household whereas others didn't. However, it was also reported by some that self-isolating within the household was unrealistic or impossible for them (e.g. if they had children to care for).

Strict self-isolation

“Followed completely even kept a distance from children”

“My entire household isolated completely, didn’t leave the house. We had shopping delivered and other family members didn’t go to work”

“Remained in my house from receiving the letter until the date that was specified. I also slept apart from my partner in a spare room and we kept 2+ meters apart during the isolation

“Stayed inside but found it difficult to distance from family family still at home including 18 month old son”

“Stayed in, didn’t even go out to exercise. Did go out in the car for a drive for a change of scenery! Didn’t leave the car though”

“Had 14 days isolation - After a negative test on the 7th day, I started to run outdoors at 5am for 20min each day”

“Myself and my husband both isolated but we did take our 4 dogs for a walk as we were completely alone and made sure we kept our distance, this was easier as we did this after dark”

“Stayed in other than to exercise but was out on my own exercising for up to 5 hours a day”

“Took no notice of the infringement of my civil liberties for a disease with a 99.75% survival rate and little evidence of asymptomatic spread”

No self-isolation

Box 1: Descriptions of self-isolation understandings and behaviour (from survey)

Interviewees also reported a high degree of adherence to self-isolation. Only two interviewees (14%) stated that they did not adhere fully to self-isolation guidelines. Non-adherence in this instance was related to trips outside the home for exercise. For one participant, this included one trip outside the home to exercise, and for the other participant this involved multiple trips outside the home for exercise. In the first instance, the reason cited for instance non-adherence was to help the mental health of the self-isolator. They also described they knew it went against self-isolation regulations, and how in doing so, they took steps to avoid being in contact with others (going at 5am in the morning) and to avoid being “tracked”:

“I didn't do the two weeks. I think I got to the seventh or eighth day, and I decided to go for a run. I think I was in like a headspace of needing to get out ... from not having

contact with anyone up to that stage and being alone and not being able to get out it was sort of a release... But I was really paranoid about doing it and I didn't take my phone, I didn't take my GPS watch. I thought I'd be like tracked. ... Yeah, it was just really tough. I did struggle with that period of time” (Participant 1, Male, 20s)

In the second instance, the participant felt that they were not breaking self-isolation guidelines by leaving the house for exercise or essential shopping. In this instance, the participant had been informed indirectly via the organisation (school) they worked for, and were not contacted directly by TTP, despite being told by their school they would be. As such they seemed to conflate general government ‘stay at home’ guidance with the stricter and more specific self-isolation guidance:

“I was expecting - and school told me to expect - a track and trace notification, but I didn't get one ... I think it was ten days I isolated for, as did the family, we stayed in ... [I was] just following the news, and from what school had told me, it was a case of don't leave the house unless it was for exercise, don't go anywhere unless it's essential, it tricky with shopping, we did some online shopping but there was other stuff we needed to get out for, but I followed the government guidelines as best I could” (Participant 14, Male, 50s)

All other participants reported completely adhering to self-isolation guidelines for the full duration of their required self-isolation period. When asked why they self-isolated completely for the full period, reasons commonly cited included doing to reduce transmission of the virus, something that was often framed as the “sensible” thing to do:

“Yes absolutely [we isolated completely] ... we were sensible enough to think, we don't want to mix, we don't want to mix, we don't want this to spread any further, so it wasn't a problem to stay home and isolate at all.” (Participant 2, Female, 50s).

As well as it being the “sensible” or necessary thing to do to prevent further transmission, adherence to self-isolation was also framed in terms of how easy or difficult self-isolating was (“it wasn't a problem at all”). We explore further participants' perceptions of their capacity to self-isolate, and the ways in which contextual factors aided or hindered self-isolation.

COM-B: Capabilities, Opportunities and Motivations to adhere.

Participants reported on their capabilities, opportunities, motivations and behaviours (COM-B) to self-isolate using a modified COM-B scale (11-point scale from 0-10 with 0 being “not at all” and 10 being “very much so”).¹³ Overall, they reported a very high opportunity and motivation to self-isolate. The majority reported that they had the physical opportunity to self-isolate (e.g. sufficient time, the necessary materials / resources, reminders) (64% ‘very

¹³ <https://bpspsychub.onlinelibrary.wiley.com/doi/full/10.1111/bjhp.12417>

much so') (N=99), the social opportunity to self-isolate (e.g. support from friends, family, local community, social networks) (54% 'very much so') (N=101), the motivation to self-isolate (e.g. I have the desire to, I feel the need to) (68% 'very much so') (N=101), the automatic motivation (e.g. 'the thought of not self-isolating didn't even occur to me (78% 'very much so)'), the physical ability to self-isolate (e.g. I have sufficient physical stamina, I can overcome disability, I have sufficient physical skills) (78% 'very much so') (N=99), and the psychological ability to self-isolate (e.g. having the knowledge, resilience, cognitive and interpersonal skills, having the ability to engage in appropriate memory, attention and decision making processes) (77% 'very much so') (N = 98). However, it is important to note that there were 2-6 individuals who reported 'not at all' in every category and 9-17% of participants scored 5 or below on the COM-B questions.

Key facilitators and barriers impacting adherence to self-isolation

Although adherence was high, participants did report a number of challenges to self-isolation. The most commonly reported challenges to self-isolation were: physical health challenges (e.g. lack of exercise, unusual aches and pains etc.) (46%), mental health challenges (e.g. anxiety, feeling down, loneliness etc.) (46%) and adjusting to usual daily routine (34%) (Figure 8). Although not as common, important challenges which may require some self-isolators to be provided with additional support included lack of access to essentials (20%), care commitment challenges (14%) and financial challenges (12%).

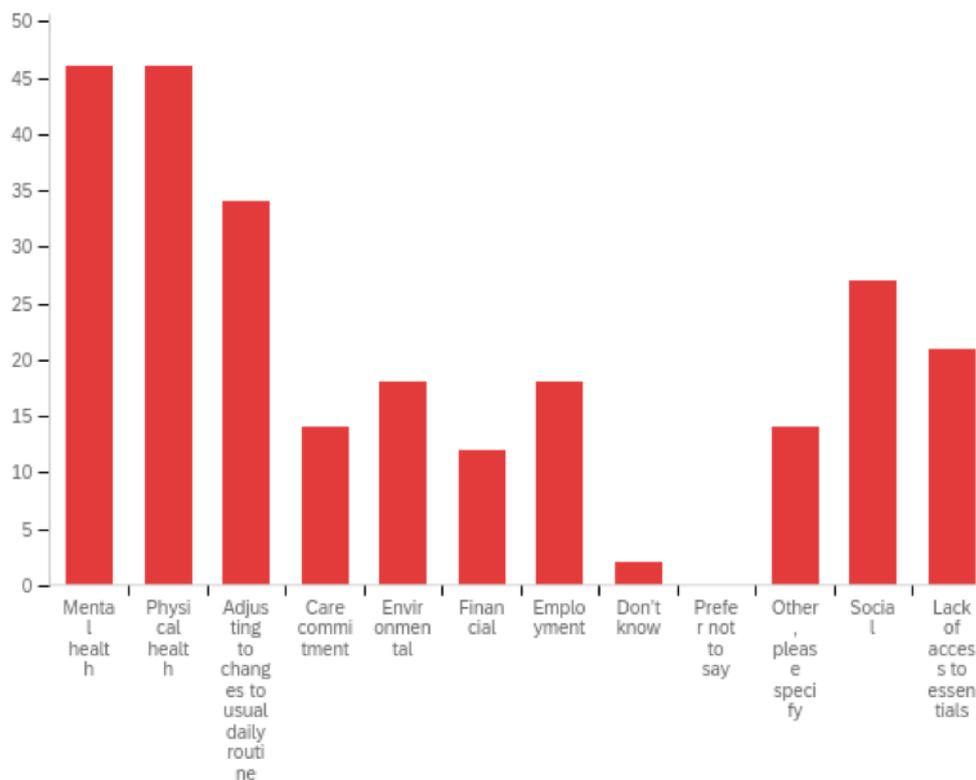


Figure 8: Please tell us about the challenges you faced while self-isolating (Y-axis: number of people)

Some participants experienced multiple challenges and described how they would have benefitted from more support from TTPs, particularly financial support and emotional and mental health support:

“Main challenges were [we were] unable to work and lost income as unwell and run own business but only short period; other main challenge was absolutely no health support you are left to get on with it without any proper advice and support about what to expect or how to manage symptoms; the worry is overwhelming as you move through the days waiting to see if you are going to tip into more serious symptoms; I am very well educated as is my husband & keep up to date but found the lack of health and care support appalling; I think there should be a call from someone to check on you & give advice; I feel traumatised by the whole event” (Anonymous survey respondent)

Financial support

Just under two-thirds (62%) of survey participants did not feel that having to self-isolate negatively impact their affected their income, although one-in-ten (10%) strongly agreed that it had (N = 98) (Figure 9).

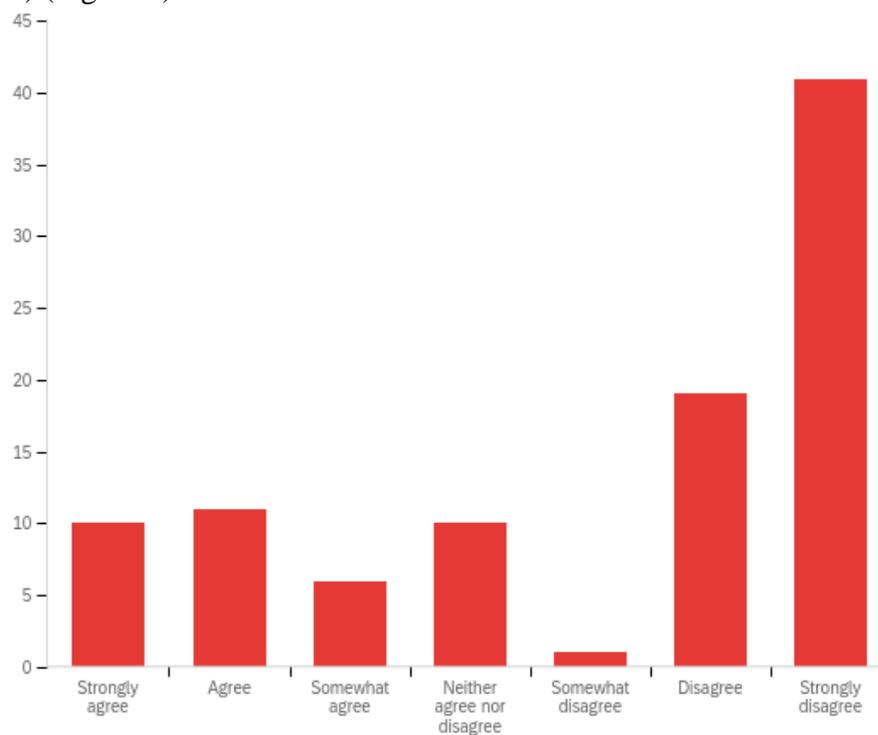


Figure 9: Having to self-isolate negatively affected my income (Y-axis: number of people)

The vast majority of survey participants (92%, N=96) were not informed by TTP about the government’s £500 self-isolation scheme. 3 applied, 1 of whom was refused. 51 people (53%, N=96) didn’t know about it at all (Figures 10-11)

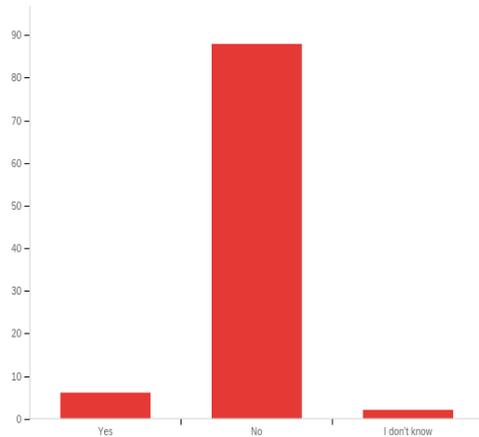


Figure 10. Were you informed about the £500 self-isolation support scheme?

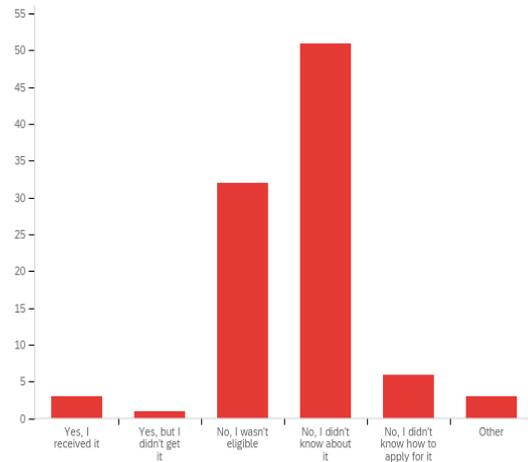


Figure 11: Did you apply for the £500 self-isolation support scheme?

As with survey participants, few interview participants discussed their financial situation with contact tracers, including their ability to cope financially during self-isolation and the existence of the self-isolation support scheme. Most participants stated that having to self-isolate did not negatively impact their financial situation. These participants were mostly receiving stable income, for example because they were retired and receiving a pension because they were able to work from home or had a salaried job with a supportive employer. However, those participants who were either self-employed or in precarious (‘zero-hour’) occupations were financially adversely impacted by the self-isolation period. For example, one participant received no financial support from their employer or government and from their own research felt they were not entitled to it (despite, prima facie, meeting eligibility criteria):

“She [the contact tracer] mentioned, nothing like that [the self-isolation support scheme]. I did learn about it by going on the government website, but from what I read I wouldn't be entitled to it. Anyway, and for the [company], I was on a zero hours contract. And the [company] actually refused to pay me.” (Participant 1, Male, 20s).

In terms of getting essential items, most participants were able to draw on their existing social networks in order to ensure they had essential items such as food and medications supplied during the self-isolation period.

Emotional and mental health support

One of the main challenges’ participants experienced was the mental health impacts of self-isolation. The majority of participants (75%, N=97) did not have their emotional or mental wellbeing checked on by TTP (Figure 12). Over half (54%, N=96) felt that they would have liked more information about support for their mental health while self-isolating (and over

half (53%, N=96) felt their mental health was negatively affected by having to self-isolate (Figure 13)

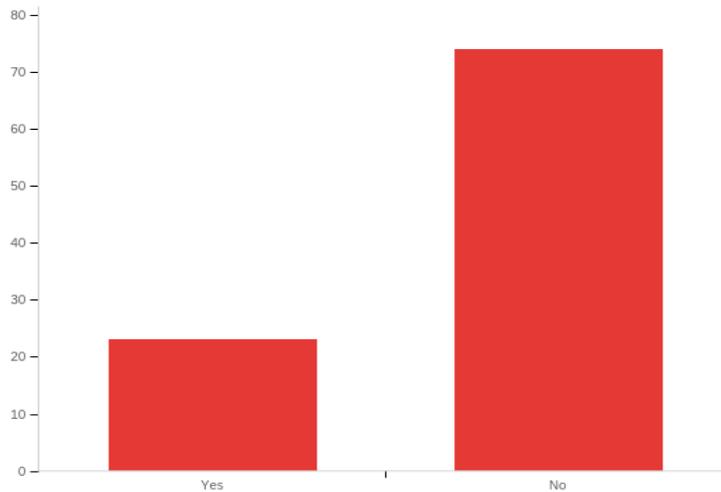


Figure 12: Did anyone from Test, Trace, Protect check in on your wellbeing while isolating?

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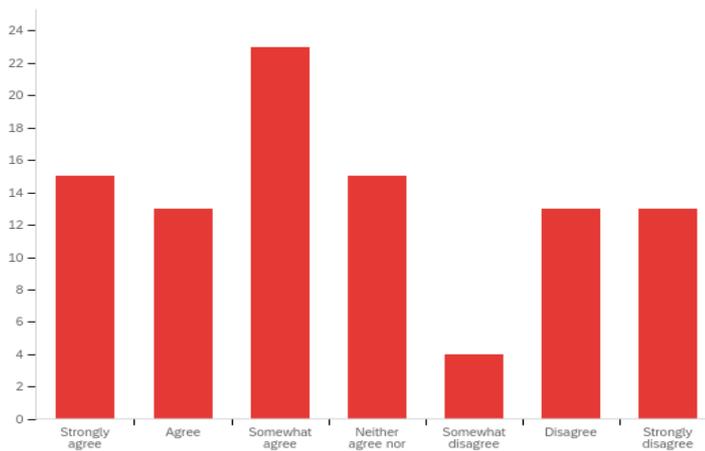


Figure 13: Having to self-isolate negatively affected my mental health (Y-axis: number of people)

Interviews revealed that those living alone found self-isolation particularly challenging in terms of their mental health. For them, self-isolation felt “claustrophobic” and like a “prison”:

“I’m in a two-bedroom apartment. And yeah, I got my got my laptop or my iPad. I got my phone, but there’s only so much you could like watch or listen to ... And yeah, I think by the end of the first week I was starting to feel enclosed in my head and thinking I’m never going to like see my friends or my family again. ... It just felt claustrophobic. And I thought, oh god, this is how a prisoner feels.” (Participant 9, Female, 40s)

One interviewee, who had reported not completely self-isolating, attributed their non-adherence to the need to leave the house in order to protect their mental health. For them, leaving to exercise was a necessary “release”. One participant described how this negative

experience had made them less adherent to public health guidance since completing self-isolation:

“I didn't do the two weeks. I think I got to the seventh or eighth day, and I decided to go for a run. I think I was in like a headspace of needing to get out ... from not having contact with anyone up to that stage and being alone and not being able to get out it was sort of a release... But I was really paranoid about doing it and I didn't take my phone, I didn't take my GPS watch. I thought I'd be like tracked. ... Yeah, it was just really tough. I did struggle with that period of time ... [Now] I don't want to give my details to anywhere like say if we went like a restaurant ... just in case you get pinged again, because I know that period of time was really difficult. ... I don't think I could do that period of time again. It made me think I would not ever like to go to prison, put it that way.” (Participant 1, Male, 20s)

Many interviewees felt that it would be beneficial for contact tracers to check on self-isolators' emotional wellbeing:

“The track and trace didn't really come back to me to check if everything was ok, regarding, you know, your mental state. Its ok for me because I know a lot of people around, but say someone lives on their own and don't get out, it must be bad for them” (Participant 5, Male, 70s)

RECOMMENDATIONS

Our research suggests that public experiences of Test, Trace, Protect in Wales are highly variable. Participants' satisfaction with TTPs was mixed. Overall, roughly half of survey respondents (48%) were satisfied with their experience of TTPs, compared to little over one-third (36%) who were dissatisfied. Roughly half of the survey respondents were satisfied with the ability of TTPs to answer their questions (54%) and most felt the advice from TTP was clear (70%) and easy to carry out (76%). Overall, we suggest four key recommendations:

Recommendation 1: TTPs should ensure consistency in its communications with those being asked to self-isolate, for example in terms of time-to-contact (consistently low, ideally within 1-2 days) and in terms of the frequency of subsequent contacts (consistently high, ideally daily).

Participants were asked how long it took for TTP to contact them after their date of exposure (if they felt they knew it). Roughly one-third (36%) of participants suggested that they believed it was four or more days from the time of contact with a positive case that they were contacted. Quickly contacting those who have been in contact with positive cases is an essential component of an effective contact tracing system. The World Health Organisation benchmark for successful contact tracing system is to trace and quarantine 80% of close

contacts within 3 days of a case being confirmed.¹⁴ It is important to note that our data is based on a limited sample size and the perceptions of the respondents themselves. As such, these findings may not be an accurate reflection of the actual time taken between exposure and contact. However, our data does suggest, from the point of view of those contacted by TTP, that there is much variability in the time taken between the perceived moment of contact with an infected individual and the point at which they themselves are asked to self-isolate. Latest available data suggests that 76% of close contacts that were eligible for follow-up were reached within 2 days of the positive case being referred to contact tracers.¹⁵ TTP should continue to strive to consistently quickly reach contacts as soon as possible after a positive test result has been received.

One key recommendation is for TTPs to consistently provide frequent follow-up contact. Although one-in-four (25%) received daily contact, half (50%) received no follow-up contact beyond the contact. Regular follow-up contact is not only a way to monitor and potentially protect against non-adherence to self-isolation but is also a means to monitor, and where necessary mitigate against, some of the potential emotional and mental health difficulties experienced by those self-isolating. We recommend daily follow-up contact for all self-isolators, ideally by phone. We make further recommendations as to the suggested content of the follow-up communications below.

Recommendation 2: TTPs should ensure that *all* those required to self-isolate are asked about their financial situation and, where relevant, provided specific information support for applying for self-isolation payments or other forms of financial assistance.

Very few survey respondents (8%) were informed about the self-isolation support scheme by TTP contact tracers. Just over half (53%) didn't know about it at all. Just under one-in-four (27%) felt that their income was negatively affected by having to self-isolate (of which, one-in-ten (10%) strongly agreed that it had). Losing income during self-isolation is likely a major risk factor for non-adherence. Existing research suggests that financial constraints are a risk factor for non-adherence.¹⁶ As such we recommend that in their initial call, contact tracers consistently establish whether those asked to self-isolate are likely to lose income as a result of self-isolating. The initial call should also consistently assess individuals' eligibility for the self-isolation support scheme. Although official decisions over eligibility are made following an application, contact tracers can help determine *prima facie* whether individuals may be eligible, and where relevant ensure that participants are confident they know how to apply. Where applicable, follow-up information from TTPs can be sent soon after the initial phone call (e.g. via email) to provide links to the self-isolation support scheme and other relevant financial aid). During one of the follow-up 'check in' calls, contact tracers should enquire with relevant individuals whether they were able to apply, whether the application was successful and whether they are meeting basic financial needs during self-isolation.

¹⁴ <https://apps.who.int/iris/handle/10665/332073>

¹⁵ <https://gov.wales/test-trace-protect-contact-tracing-coronavirus-covid-19-16-january-2021-html>

¹⁶ <https://www.medrxiv.org/content/10.1101/2020.09.15.20191957v1.full.pdf>

Recommendation 3: TTPs should *consistently* enquire into the mental and emotional wellbeing of those asked to self-isolate and should provide resources and links for available and relevant mental health support.

A standardised script for TTPs contact tracers should include a basic screening question to assess individuals' wellbeing (e.g. "have you been feeling sad or anxious so much that it affected your functioning?"). All self-isolators should be systematically provided with resources on promoting emotional wellbeing during self-isolation and should receive a daily contact (ideally via phone call if possible, or by text if not) to check-in on individuals wellbeing. Those identified as experiencing or being at risk of experiencing particular emotional difficulty should be provided with more detailed and specific mental health resources (e.g. Samaritans, Mind) or where necessary be referred to the relevant mental health. Ideally, contact tracers would be provided basic training in identifying those at high of mental and emotional difficulty during self-isolation.

Recommendation 4: People who do *not* feel they have the capability, opportunity or motivation to adhere to self-isolation need to be systematically identified and provided with support resources to help them adhere.

A minority of individuals reported severe physical, psychological and motivational difficulties with self-isolation. Additional supports for enabling and incentivizing these individuals should be provided where possible, including, as suggested above financial and emotional support. Screening with a modified COM-B to check on adherence motivation may be useful immediately following initial contact (for example a link sent to a screening webform via text and/or email). In addition to systematically identifying those individuals who are at risk of losing income and/or experiencing financial hardship as a result of self-isolation and those who may be at high risk of experiencing emotional difficulty, TTPs contact tracers should seek to systematically identify those who have care commitments and those who lack access to essentials. Contact tracers should consistently ask standardized questions, for example "will you be able to get all your essential items (e.g. medicines and food) during the self-isolation period?" and "do you have anyone that you have caring responsibilities for that you will need support with during your self-isolation period?". Where relevant, TTPs can help link self-isolators with relevant Covid-19 self-isolation support voluntary groups and with relevant local care support services.