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How *Understanding Society*: The UK Household Longitudinal Study adapted to the COVID-19 pandemic

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Understanding Society is a household panel survey with continuous fieldwork (monthly samples) using a mixed mode design. Prior to March 2020, around half of all interviews were carried out face-to-face, amounting to around 1,150 interviews per month. This article outlines how the survey rapidly transitioned to a protocol without face-to-face interviews and presents some initial indicators of the impact of the change on field outcomes.

Keywords: CATI; mixed-modes; Understanding Society; web survey

1 Background: *Understanding Society*

Understanding Society: the UK Household Longitudinal Study, is a large national probability-based household survey that has been collecting data continuously since January 2009 (Institute for Social and Economic Research, 2019). It is funded primarily by the UK Economic and Social Research Council to provide a data resource for the research community, with co-funding from a consortium of government departments. Nearly 100,000 people in almost 40,000 households were part of wave 1 in 2009–2010, including the British Household Panel Survey (BHPS) sample. At the time of wave 11 (2019–2020), the sample consists of around 22,400 households. At each annual wave, every adult sample member, and each other adult member of the current household of that person, is invited to complete an interview of around 40 minutes. One person in each household also completes a household interview of around 12 minutes, and children aged 10-15 years are invited to complete a paper self-completion questionnaire. Interview topics include employment, education, health, housing, income, social and family networks, and civic engagement.

The sample is representative of the entire UK population, consisting primarily of clustered, stratified samples of households in England, Scotland and Wales and an unclustered sample in Northern Ireland (Lynn, 2009). There are also sizeable boost samples of ethnic minorities and immigrants, which are naturally concentrated in urban areas (Lynn, Nandi, Parutis, & Platt, 2018). The sample is issued as 24 monthly samples, and each monthly sample is in the field for just over 5 months, so fieldwork for each wave takes around 28 months. As interviews take place annually, waves overlap with the first year of each wave taking place concurrently with the second year of the previous wave. Fieldwork is currently carried out under contract by Kantar and NatCen.

The first six waves of data collection (2009–2015) were carried out almost entirely by face-to-face in-home interviewing, with a small number of telephone interviews (CATI) carried out where necessary, amounting to around 2% of all interviews. At wave 7, online interviewing was introduced for the first time, but on a rather modest scale, being offered only to sample members in households in which no-one had responded at wave 6. Wave 8 (2016–2017) saw the introduction of a mixed-mode approach including web on a large scale (Carpenter, 2018): 40% of sample members were asked to participate online (the "web-first" sample), a proportion that increased to 60% at wave 9 and 70% since wave 10. All those who do not complete the web survey are subsequently approached in person for a face-to-face interview, as are the remaining sample members who were not invited to the web survey. This latter group ("CAPI-first") consists of a random 20% of the total sample plus the remaining households who were predicted to have the lowest probability of completing online (since wave 10, 12.5% of the non-ring-fenced, i.e. 10% of the total sample). CATI continues to be used for a small number of mop-up interviews. At wave 9, 18,199 individual interviews were completed online and 17,608 face-

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to-face.[1]

2 Decision to suspend face-to-face interviewing

During the first couple of months of 2020 news of COVID-19 grew worldwide. At the end of January the four UK Chief Medical Officers increased the risk level from "low" to "moderate", and the first known cases of COVID-19 were confirmed in England. During February, a public information campaign about the virus was launched, and in early March the government published the COVID-19 action plan. At this time, ISER, and fieldwork agencies, began contingency planning to enable the continuation of work during an escalation in the impact of the SARS-CoV-2 virus. This covered the staff working on the study and data collection. On March 11th the WHO declared COVID-19 a pandemic and we added some text to the *Understanding Society* participants page to give participants information about the strict hygiene procedures being followed by interviewers. Sample members who had concerns, or were feeling ill themselves, were encouraged to contact us so we could reschedule interviews if necessary.

The following day, March 12th, new self-isolation measures were announced for those with symptoms of the virus as the UK moved from the 'contain' to the 'delay' phase. Observing the way other European governments had managed this, on Sunday March 15th, the *Understanding Society* Executive Team agreed to suspend face-to-face interviewing, including on the ring-fenced CAPI-first sample.

On Monday March 16th, we notified the fieldwork agency, who initially recommended interim measures; such as interviewers wearing face-masks and to re-schedule interviews with those aged 70 or older. Later that day the government introduced measures to "stop all essential contact with others and to stop all unnecessary travel".[2]

The next afternoon, 17th March, the fieldwork agencies contacted interviewers and suspended face-to-face interviewing. On 18th March, a message was added to the *Understanding Society* website to let participants know about the suspension of face-to-face fieldwork and that they would have the opportunity to complete their interviews online or by telephone instead. The following Monday, 23rd March, in an address to the nation, the Prime Minister announced new lockdown measures, closing non-essential shops, and asking people to stay at home, and only leave their home for a small number of essential purposes.[3]

3 New Field Protocols

Understanding Society was already a mixed mode survey, as noted above. The script for the active waves of data collection existed in CAPI, web, and CATI. This meant that the study was well-placed to shift the face-to-face fieldwork to web-first, with non-respondents followed up by telephone. The University of Essex responded rapidly to provide ethics approval for the switch on March 18th.

Each monthly sample has a relatively long fieldwork period of just over five months, which includes a web-only period, then a period for interviewing in the follow-up mode, a reissue period, and then – usually – a telephone mop-up period. In combination with the design of overlapping waves, as described earlier, this means that several monthly samples are in the field at any one time.

Active in the field on 17th March were the last two sample months of wave 10, the last two sample months of the first year of wave 11 and the first three months of the second year of wave 11, and the first three months of wave 12. At the point that face-to-face interviewing was suspended, most of the expected face-to-face fieldwork had been completed on the November and December samples, about half of the January samples, around a tenth of the February samples, and none of the March samples.

Letters were sent to all those sample members who were still actively being contacted to let them know about the suspension of face-to-face fieldwork and give them unique log-in details to complete online. Sample members were told that if they were not able to complete online, an interviewer would telephone them. Face-to-face interviewers who were working on wave 12 of the study already had the telephone version of the script on their lap-tops and, with ethical approval in place, were able to start telephone interviewing from their homes on March 18th. The wave 11 telephone script needed to be transmitted to the interviewers' lap-tops before these could be used, which was done on Friday 20th March. After around 3-4 weeks of telephone fieldwork there was a slight delay in fieldwork progress when the fieldwork agencies furloughed a number of their interviewers, and so work had to be re-allocated to those interviewers remaining actively working.

For the April samples, which were due to start the web-only period on March 23rd (wave 12) and April 1st (wave 11), the full samples were issued web-first, although fieldwork was delayed by a few days to allow invitation letters to be updated and despatched. The sample management systems at ISER and the fieldwork agencies were already set-up to be able to manage mixed modes, and switching between modes, and so the transition of the previously-CAPI-first sample to web-first was seamless. All samples will continue to be issued web-first for the foreseeable future.

Since wave 9 of *Understanding Society* the fieldwork costs had been managed using an 'open book' system, which

[1] Wave 9 data. University of Essex, Institute for Social and Economic Research, NatCen Social Research, and Kantar (2019)

[2] https://www.understandingsociety.ac.uk/research/themes/covid-19

[3] https://www.gov.uk/government/speeches/pm-statement-on-coronavirus-16-march-2020

gives greater transparency over variable costs. This has enabled us to manage the uncertainty of the mixed-mode fieldwork and the effects of this on the overall cost of the study and to realise cost savings and redirect them into quality improvements more rapidly. The costs related to the suspension of the face-to-face fieldwork, the expansion of the web-first approach, and the use of telephone as the follow-up mode, can all be managed within the open book system, without incurring financial penalties or requiring variations to contracts. Savings accrued through the suspension of face-to-face fieldwork (e.g., travel time and expenses) are being redirected to pay the interviewers the standard fee for a face-to-face interview for those which are conducted by telephone, and those completed online after the interviewer contacts the household by telephone to encourage interviewers to facilitate the online interview.

The priority for the waves of data collection active in the field was to change the fieldwork protocol as described above. Once this had been established, we turned our attention to questionnaire content, since it was clear that the change in everyday life for most people was so significant that it would touch almost every aspect of the questionnaire. Nevertheless, we made the decision to make only minor changes to the questionnaires in the field, to ensure that the data collected would be comparable to previous waves, and that we would not confound real change with an artificial change due to the question changing. We added guidance at the start of the interview that "Due to the coronavirus/Covid-19 pandemic, we know that life has changed a lot for everyone in the country. When you are answering the survey, we would like you to answer according to your circumstances now, even if these are not normal". A new module was added to waves 11 and 12, focusing on the COVID-19 pandemic, which included questions on health conditions and the experience of COVID-19 within the household. There were minor updates to employment questions with new response options of being furloughed, or on temporary unpaid leave. There were some updates to the self-employment questions to reflect the possibility of receiving government assistance. We also brought into the wave 12 questionnaire a small set of rotating modules which were part of wave 11 but were not initially included in wave 12: food bank use, loneliness, exercise, and nutrition. It is expected that the updated wave 11 and 12 questionnaires will be implemented in the field for the July fieldwork onwards.

We have also begun – since April – a monthly *Understanding Society* COVID-19 survey focusing more specifically on rapid changes in people's lives due to the pandemic. In this monthly survey we are inviting all adults to take part in a 20-minute online survey each month. In April we sent adult sample members a pre-notification letter with information about the COVID-19 study. Invitations and reminders were then sent by email and/or SMS. Adults in households where there are no regular internet users will also be invited to take part in a telephone survey in May 2020 and again later in the year.[4]

4 Outcomes

We perceive the transition to the new data collection protocol to have been a success. We have received a lot of support for acting quickly and avoiding a hiatus in data collection, from which many other surveys have suffered. However, some users have rightly expressed concern about mode effects. These concerns may be justified given that the people now responding online include some who would not normally have done so, and the increased number of people responding by telephone (Jäckle, Roberts, & Lynn, 2010). This is something we have been investigating more generally, and will be well placed to advise users when data are released.

As the field period for the April sample will run until mid-September, it is too early to be confident about the final response rate. As an early indicator, we present here household web take-up rates during the initial web-only period.

The April web-only period finished on May 5th for wave 11, and May 6th for wave 12. Early analysis indicates that for wave 11 the household completion rate for the "web-first" sample was a little higher in April (48%) than in previous months: January, 42%; February, 44%; March, 40%. For wave 12, the April household web completion rate (50%) was similar to January (51%) and February (53%) and higher than March (41%). In April 30% of the sample – who would in normal circumstances have been issued CAPI-first – were also issued web-first. This was the first time that the adults in these households had been invited to take part online, rather than have an interviewer visit them. The household web completion rates amongst this group were 25% (wave 11) and 38% (wave 12).

The different rates in the two waves may be related to the composition of the sample. There are differences between the year 1 (months 1 to 12) and year 2 (months 13 to 24) samples, though the composition is constant between months within a year. The former BHPS sample and the Northern Ireland sample are restricted to year 1 and the more recent Immigrant and Ethnic Minority Boost (IEMB) sample (introduced in 2015) is issued during year 2 of each wave. Response is generally higher for the BHPS sample than the IEMB sample, so wave 12 year 1 response is expected to be higher than wave 11 year 2.

The outcome of the telephone follow-up stage remains to be seen, but early progress is encouraging. There was a slightly slower start to the March telephone fieldwork, compared to earlier months face-to-face fieldwork, but this is

[4] https://www.gov.uk/government/speeches/pm-address-to-the-nation-on-coronavirus-23-march-2020.

likely due to a delay whilst work was re-allocated among interviewers.

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Commentary

This paper provides a comprehensive account of how Understanding Society: the UK Household Longitudinal Study (UKHLS) adapted to the COVID-19 pandemic and government-imposed restrictions. The authors provide a detailed chronology of the daily (and sometimes, hourly) government responses that ultimately led to the UKHLS Executive Team's decision to suspend all face-to-face interviewing in the "ring-fenced" CAPI-first sample and in the non-response follow-up phase of the "web-first" sample, and adopt a web-first design with non-response follow-up conducted via telephone for all remaining households in both samples. Prior to the pandemic, UKHLS had been gradually increasing the size of its web-first sample from 40% of the total sample in wave 8, to 60% in wave 9, and reaching 70% since wave 10 with non-respondents subsequently approached via CAPI, and CATI used to carry out a small number of "mop-up" interviews. Thus, the study was well-positioned to shift away from face-to-face interviewing during the pandemic and implement a web-first design with CATI follow-up interviewing for all remaining households in both samples.

It is natural to question the decision to impose a web-first design on the 30% ring-fenced CAPI-first sample, instead of adopting a CATI-first design and preserving the strict interviewer-administration that was originally intended for this group. A CATI-first approach would be expected to be more similar to the original CAPI-first approach and thus could minimize mode effects. The CAPI interviewers could have been used to carry out CATI interviews with their usual household assignments in order to maintain some semblance of a regular interview. Presumably this would have been possible given that telephone scripts were transmitted to interviewer laptops. On the other hand, the furloughing of interviewers by the survey institute may have precluded all CAPI-first households from being contacted by their usual interviewer. But even the assignment of a different interviewer would have protected the interviewer-administration aspect of the ring-fenced sample, which is a very unique aspect of the UKHLS design and has been a valuable resource for studying the effects of single vs. mixed-mode data collection in longitudinal surveys.

With space permitting, the consequences of adopting the web-first design in the ring-fenced CAPI-first sample could have been explicated further. The authors acknowledge the potential for mode effects and plan to investigate this issue and advise data users accordingly. It would have been interesting to know what are the expected measurement effects of both the pandemic and the mode changes, and what is the strategy for measuring and accounting for these effects when analyzing the data, especially for time series analysis with data pooled from multiple waves. Quickly organizing a mode-design experiment by randomly allocating households to a single-mode (CATI) vs. mixed-mode (Web-CATI) design may have been able to shed light on the possible effects of introducing self-administration into the ring-fenced CAPI-first sample. Perhaps such an experiment is still a possibility for the upcoming monthly samples.

Nevertheless, it will be interesting to see what the final response rates look like, and how they will compare to previous months/waves of CAPI-first interviewing. It is already interesting to know that 25% (wave 11) and 38% (wave 12) of the monthly CAPI-first sample completed the survey online in April. What was not reported, however, were the web take-up rates among households in this sample that were predicted to have the lowest probability of completing a web survey (roughly 10% of the total sample). The current situation offers the opportunity to validate the model predictions and re-calibrate the model based on this new information. Presumably households who completed the web survey will

now have a higher estimated web response probability going forward in the panel. This raises the question of whether some households will no longer be ranked among the lowest web-propensity households, and if this occurs, will they then leave the ring-fenced CAPI-first sample and join the main web-first sample in subsequent waves?

In conclusion, the decision to suspend face-to-face interviewing was necessary and fortunately the UKHLS was well-prepared to adapt to this situation by ramping up the use of telephone and online data collection. These adaptations, along with the period effect of the COVID-19 pandemic, will have interesting implications for panel participation, substantive questions, and the conduct of future panel waves. I thank the authors for their valuable contribution and I look forward to follow-up outputs from the UKHLS team that address these issues.

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