


The Opinions and Lifestyle survey (OPN)

The challenge – March 2020

- Convert the current monthly OPN (Opinions and Lifestyles) into a weekly OPN survey about COVID-19...in a week
- Results are going straight to the PM to help inform UK COVID-19 lockdown policy!
- How do we do this to minimise survey error across all of the end-to-end survey processes?

Our timetable

- w/c 9/3 – gather question requirements, start question design, sample sourced and drawn, work on respondent materials
- Monday 16th – sign off respondent materials + send to print, finalise q're
- Tues 17th – Online survey programming team script q're
- Weds 18th – research team check online q're script
- Weds 18th – letters posted to respondents 
- Thurs 19th – Online q're signed off, call centre briefed, ONS webpages live
- Fri 20th – Respondents start to complete, phone interviewers briefed, analysis processes set up
- 21-22 – Telephone interview 'nudging'
- Mon 23rd (6am) – data to analysts

w/c 23 March

- “Please do all of that again this week with these questionnaire changes”
- “Oh and please get a higher response rate this time”

Some of the risks

- We choose a sample source that is incomplete and/or out of date
- We send letters to the wrong addresses with the wrong access codes
- Respondents aren't convinced taking part is a good use of their time as the materials we send them are not engaging
- We ask the wrong questions in the questionnaire
- We ask the questions in the wrong way or in the wrong order – respondents not willing to answer, able to understand, able to recall
- We don't check the online questionnaire script properly
- The ONS webpages don't link up properly
- The enquiry line don't know enough about the survey
- Telephone interviewers aren't properly briefed so introduce the survey and ask survey questions inconsistently

Minimising TSE in our scenario

- Coverage error
 - Most representative, newest and most available sample frame?
- Sampling error
 - How to sample? Sample processing?
- Measurement error
 - Identifying the research question(s) – who is closest to policy makers?
 - Questionnaire design – who can design questions well, at speed?
 - Q're programming and checking – who is best at programming and checking at speed?
- Non-response error
 - Respondent communications – best practice?
 - Encouraging and enabled enquiry line
 - Telephone interviewer nudge
 - Incentives
 - Developing response maximisation initiatives week by week

Sampling

- Wave 2 Labour Market Survey (LMS)
- Wave 6 Labour Force Survey (LFS)
- Opinions and Lifestyle survey (Wave 7)
- Other ONS social surveys?

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How do we know we did well in the end?

UKSA – Rapid review

We welcome the rapid development of these statistics so they could support the UK Government's pandemic management, demonstrating their high relevance to policy makers. Following their publication, their public good will be further demonstrated by helping a wider range of organisations and the general public to understand how citizens have adapted their behaviours in response to the pandemic.

<https://www.statisticsauthority.gov.uk/correspondence/rapid-review-of-ons-opinions-and-lifestyle-survey-covid-19-questions/>

Concluding thoughts

- Use your networks to establish the best team you can
- Use the most experienced people you can at each point
- Find the right balance for team size – big enough to cover all expertise, small enough to avoid ‘too many cooks’
- Clear roles and responsibilities
- Use the best pre-existing materials you can (i.e. questions, samples, respondent materials)

The COVID-19 Infection Survey (CIS)

Tuesday 14th April 2020

- Emergency meeting between the Department of Health and Social Care (DHSC), the Office for National Statistics (ONS) and Oxford University
- “How can we measure prevalence of COVID-19 in the general population?”
- Professor Sarah Walker (OBE) puts her hand up.....

April 2020

- **Thurs 16th**: agreement to proceed with **seroprevalence** study
- **Fri 17th**: first protocol draft: venous blood draw & nose/throat swabs monthly, 18y+, 1000 **households**, then a further 1000 households/month for 1 year
- **Sat 18th**: down to 12y+ (blood if 16y+), extra nose/throat swab at 2 weeks
- **Sun 19th**: down to 2y+ (blood if 16y+), more extra nose/throat swabs at 1/3 weeks, increase to 11,000 households per month for 1 year
- **Mon 20th**: protocol v1.0 submitted 6pm, together with 8 additional materials
- **Tues 21st**: protocol v1.0 approved by ethics, materials sent for printing and dispatch
- **Sun 26th**: first participant recruited
- **Sun 10th May**: first results published in ONS bulletin – 0.24% positivity rate, ~136,000 individuals in England
- **Fri 9th July 2021**: 0.61% positivity rate, ~332,900 positive individuals in England

Survey Design

- Aim: Measure rates of infection and how many people have developed antibodies to the virus over time
- Sample: Representative of UK by geography, ethnicity and age
- Method: Repeated at-home (infection) and capillary blood (antibody)
 - Swab: Every weekly visit that takes place in the first month (week 0-4) 5 visits in total, then monthly for 12 months
 - Blood: ~40% of swabbed people, every month for 12 months
 - £50 incentive per person at first visit, £25 for subsequent visits
- Pilot: 11,000 households, 25,000 people
- Main study: 179k unique swabs per fortnight, 150k bloods per month



What have our findings shown?

- Data from the CIS has directly supported key decision making:
 - Regional lockdown
 - December lockdown
 - New variant
 - Roadmap

Covid: England's regional tiers to be set out

🕒 26 November 2020 | 🗨️ Comments

Covid-19: Christmas rules tightened for England, Scotland and Wales

🕒 20 December 2020 | 🗨️ Comments

Confirmed cases of COVID-19 variants identified in UK

Press release

Prime Minister sets out roadmap to cautiously ease lockdown restrictions

Minimizing sampling error for CIS

- Measurement error
 - Sensitivity and specificity of Covid-19 tests
 - Getting the questionnaire right first time
- Coverage error
 - Finding the most suitable sampling frame
- Sampling error
 - How to sample? Issues around sampling when prevalence isn't static
- Non-response error
 - Targeting ethnic minorities
 - Weighting versus modelling

Minimizing measurement error: Test sensitivity and specificity

- How do we understand prevalence of Covid-19, false positives and false negatives?
- What is test sensitivity and specificity?
- How do we understand the impact of these on our estimates?

Table 1: The effects of test sensitivity on estimates

Reference period: 6 to 19 September 2020	95% credible interval	
	Lower	Upper
Estimated average percentage of the population who had COVID-19 (weighted)	0.22%	0.26%
Prevalence rate in Scenario 1 (medium sensitivity, high specificity)	0.17%	0.29%
Prevalence rate in Scenario 2 (low sensitivity, high specificity)	0.24%	0.49%

Source: Office for National Statistics – Coronavirus (COVID-19) Infection Survey

Key lessons learnt

- 1. Bring in experts who can work quickly under pressure
- 2. Forget perfection
- 3. Continual improvement
- 4. Respond quickly to new requests
- 4. Make use of existing knowledge, processes and materials

Future ONS Public Health Monitoring Analysis and Reporting

