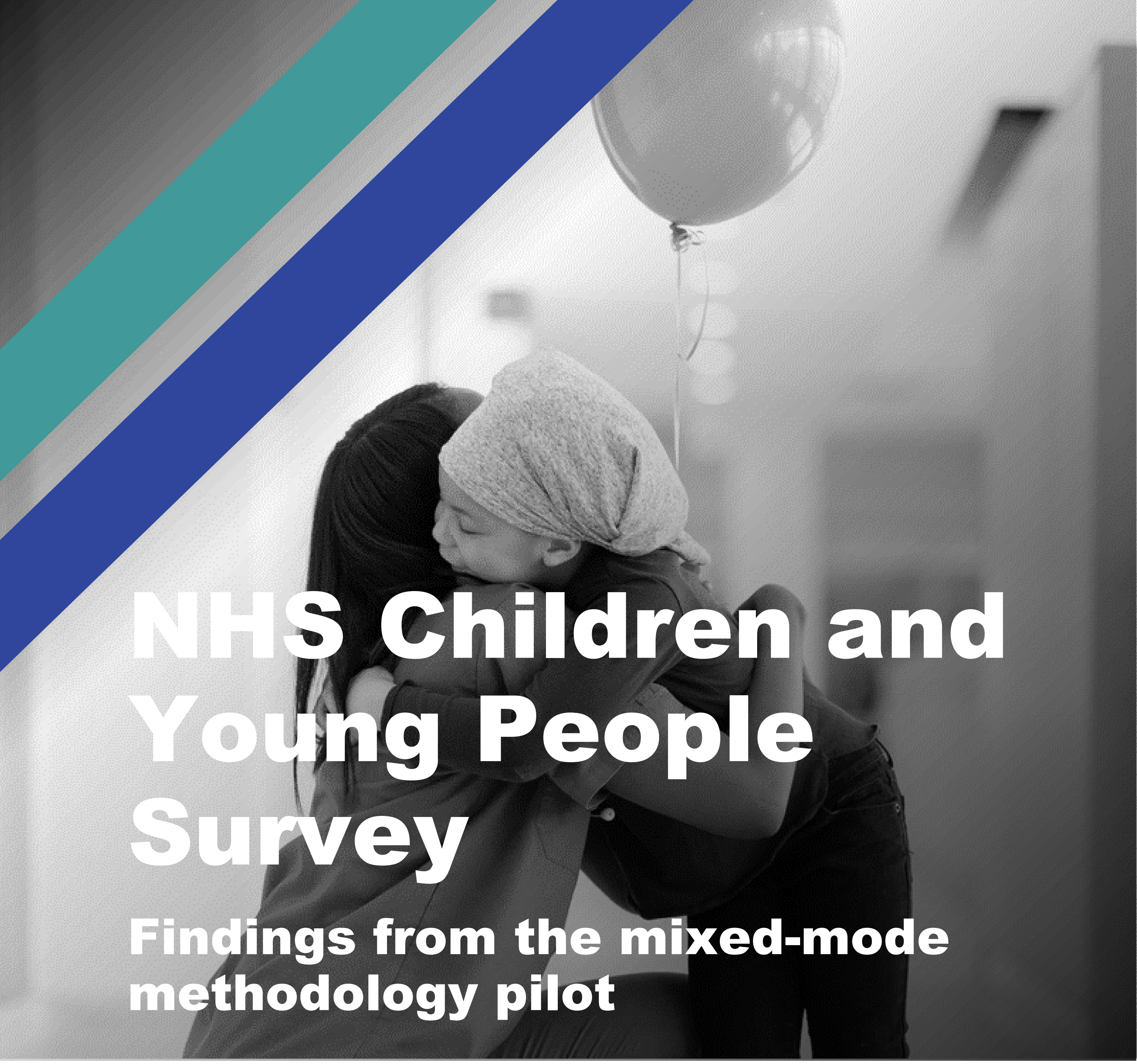

NHS Children and Young People Survey

Findings from the mixed-mode methodology pilot

Ipsos MORI, Social Research Institute

November 2020

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Executive summary

Background and methodology

The NHS Patient Survey Programme (NPSP), commissioned by the Care Quality Commission (CQC), allows patients and the public to feed back on their recent experiences of NHS services. The programme currently comprises the Adult Inpatient Survey, Maternity Survey, Community Mental Health Survey, Children and Young People's Survey and Urgent and Emergency Care Survey.

The strategic direction for the NPSP sets out CQC's ambitions to create a digital method of survey delivery. The CQC commissioned Ipsos MORI to advise on and transform the existing programme from a paper-based method to a mixed-mode solution.

This pilot was conducted to analyse the feasibility of transitioning the Children and Young People's Survey to a mixed-mode methodology. All surveys in the NHS Patient Survey Programme are currently implemented as entirely paper-based surveys, with the exception of the Adult Inpatient Survey which is in the process of transitioning. The mainstage Children and Young People's survey currently includes three mailings containing paper questionnaires, and patients do not have the option to complete the questionnaire online.

An experimental approach was taken to the pilot, which included a control group – which used the current mainstage protocol – to enable comparison of the experimental approach with the current paper-based approach.

Table 1.1: Methodology of Control and Experiment groups

Mailing	Control	Experiment
M1 (Week 1)	Letter with paper questionnaire	Letter with URL
SMS1 (+3 days)	N/A	SMS after M1
M2 (Week 2)	Letter	Letter with URL
SMS2 (+3 days)	N/A	SMS after M2
M3 (Week 4)	Letter with paper questionnaire	Letter with URL and paper questionnaire
M4 (Week 6)	N/A	Letter with URL
SMS3 (+3 days)	N/A	SMS after M4

This pilot also offered an opportunity to provide answers to questions raised by the findings of the Adult Inpatients Pilot. In particular, in that pilot, those who took part in the experiment group where less likely to report having a long-term condition. It was hypothesised that this may be because those taking part online were not presented with the list of long-term conditions unless they indicated they had a long-term condition at the previous filter question. Therefore, an alternative long-term condition question was tested in the online survey, which combined whether or not the child or young person had a long-term condition with the list of long-term conditions.

Response rate analysis

With four mailings, the experiment group was able to achieve a similar response rate to the control. However, this was heavily impacted by the availability of mobile numbers – trusts with high levels of mobile numbers saw much higher response rates in the experiment group than those with low levels of mobile numbers. Trusts who provided a low percentage of mobile numbers suggested that they could provide more mobile numbers if changes were made to the sampling guidance.

The demographic profile of the achieved samples were similar between the control and the experiment group, with the experiment group providing more representative results among those from BAME groups and those from lower IMD areas.

Participants were keen to take part online when offered – of those who completed the survey, around two-thirds took part online.

Impact of the fourth mailing

The fourth mailing did not have a significant impact on demographics or question responses. However, it did significantly increase the response rate.

Where more than 50% mobile numbers were included in the sample at a trust level, three mailings achieved a comparable response rate with the control.

Long-term condition question

Unlike the Adult Inpatient Pilot, there was no significant difference in levels of long-term condition reported between participants in the control group and the experiment group using the standalone filter question. However, a combined long-term condition question increased the percentage reporting long-term conditions, particularly among those whose long-term condition did not significantly impact their day-to-day life, and with particular conditions such as asthma.

Question response analysis

Analysis of responses to questions between the experiment and control groups found that questions asked of parents or guardians were more negative in the experiment group than the control group. This is in line with findings in the Adult Inpatient Pilot. Questions asked of children and young people themselves did not see similar differences.

Overall, it is likely that a break in trends would be necessary following a move to mixed-methods approach for this survey, at least for the parents section reporting.

Para data analysis

The para data from the online survey suggests that the patients who accessed the online survey and completed the first question generally went on to complete the survey. Having completed the first question, break-off rates were low and the majority of participants completed the survey in one attempt.

The days the reminders arrived, particularly the SMS reminders, were associated with peaks in online survey completion rates.

Mobile phones were the device most commonly used to access the online survey. Therefore, any future online survey will need to ensure it is designed using 'mobile-first' principles to increase accessibility.

Conclusion

Decisions need to be made on the potential of moving Children and Young People’s Survey 2020 to a mixed-mode methodology.

The findings from the pilot suggest that transitioning the survey to mixed-mode method could result in acceptable response rates and data quality using three mailings. However, higher levels of mobile numbers would need to be provided and a break in trends would need to be accommodated.

However, decisions will also need to be based on stakeholder feedback, including trusts, and other survey-data users.

1 Introduction

The NHS Patient Survey Programme (NPSP), commissioned by the Care Quality Commission (CQC), allows patients and the public to feed back on their recent experiences of services. The programme currently comprises the Children and Young People's Survey, Maternity Survey, Adult Inpatient Survey, Community Mental Health Survey and Urgent and Emergency Care Survey.

The NPSP is designed to capture the views of representative samples of patients in a systematic way from all eligible NHS trusts in England. The data feeds into CQC's regular monitoring tools and is also used by a range of other stakeholders such as NHS England, Clinical Commissioning Groups and NHS trusts themselves. Other statistics users include local authorities, academics, researchers and third sector organisations.

The strategic direction for the NPSP sets out CQC's ambitions to create a digital method of survey delivery. To improve accessibility to the survey, address falling response rates and reduce non-response bias, the CQC is exploring transitioning the NPSP to a mixed-mode methodology using online methods alongside the current postal approach. The CQC commissioned Ipsos MORI to advise on and transform the existing programme from a paper-based method to a mixed-mode solution.

This report presents findings from the NHS Children and Young People's Survey mixed-mode methodology pilot. The pilot had two key aims:

1. to assess the feasibility of conducting the survey using a mixed-mode methodology designed to encourage online response (a "push-to-web" approach);

2. to compare findings obtained using this push-to-web methodology and the current postal method, and to assess relative levels of overall non-response bias.

Specifically, the pilot tested the effectiveness of the following new interventions:

- sending invitation and reminder letters asking participants to complete the survey online;
- sending SMS invitations and reminders;
- administering the questionnaire online (instead of by paper questionnaire).

There are several potential benefits and risks associated with the push-to-web approach, as outlined below. The aim of the pilot was to ensure any methodological changes make the most of these benefits and minimise the risks.

The key potential benefits of a push-to-web approach are outlined below:

Making the survey more cost-effective: Push-to-web surveys require fewer paper questionnaires to be printed. Decreasing the number of postal responses also saves money on return postage, scanning and paper storage.

Better data quality: When setting up an online survey, it is possible to introduce validation rules to ensure participants follow routing correctly and do not select incompatible answer codes. In paper-based surveys, these responses must be cleaned manually. This means responses to online surveys tend to be better quality, as less data needs to be removed.

Increasing responses from younger patients: Response rates from the Children and Young People's Survey have historically been higher for those in the oldest age group (those aged 12-15), and lower for the youngest age group (those aged 0-7). Therefore, methods of increasing response from the younger age groups would help to make the survey more representative.

The key risks of moving to a push-to-web approach are as follows:

Impact on trends: With any change to survey methods, there is a risk of disruption in trend data. This is due to the introduction of new mode effects and differences in the profile of participants. It is important to monitor this to ensure that any changes in the data across waves are due to a real change, and not simply the change in mode.

Impact on non-response bias: Surveys that use an online only methodology introduce coverage bias; those who cannot or would not complete a survey online will not take part. Overall, participants in online surveys tend to be younger, and better educated than participants that respond by other survey methods. Therefore, when trying to achieve a representative sample, it is important to offer alternative completion methods (such as paper) in addition to online.[1] Alternative methods normally mitigate increases in non-response bias, but it is important to monitor for any differences.

Impact on response rates: Push-to-web surveys tend to have lower response rates than traditional postal surveys. It has been suggested this may be because some participants would prefer not to participate online and are deterred from responding even when later mailings allow them to take part by paper. Although response rates do not necessarily correlate with non-response bias[2], a lower response rate may mean that a larger initial sample is required to get the same number of responses, which can impact on cost.

This pilot received Section 251 approval for the sharing of patient details for the purpose of the pilot and underwent review by an ethics panel comprising research ethics experts, patient representatives and survey experts from Ipsos MORI and Picker Institute.

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[1] E.g. Messer, B. L. and Dillman, D. A. (2011). Surveying the general public over the Internet using address based sampling and mail contact procedures. Public Opinion Quarterly, 75, 429-457

[2] E.g. Groves, R. and Peytcheva, E. (2008), The impact of nonresponse rates on nonresponse bias: a meta-analysis. Public Opinion Quarterly 72, 167-189

2 Methodology

This pilot was conducted to analyse the feasibility of transitioning the NHS Children and Young People's Survey (CYP) to a mixed-mode methodology. All surveys in the NPSP are currently implemented as entirely paper-based surveys, with the exception of the Adult Inpatient Survey which is in the process of transitioning. The mainstage Children and Young People's Survey currently includes three mailings, the first and third of which contain paper questionnaires, and patients do not have the option to complete the questionnaire online.

An experimental approach was taken to the pilot, in which a push-to-web approach was tested. In addition, the pilot included a control group – which used the current mainstage protocol – to enable comparison of the experimental approach with the current approach.

As a note, fieldwork for the survey is normally conducted using approved contractors and trusts themselves. However, for the purposes of the pilot, all fieldwork was conducted centrally.

2.1 Sampling

2.1.1 Selection of trusts for pilot survey

The pilot was designed to achieve a sample size of 4,860 responses (across 19 trusts). This sample size was large enough to enable comparison between the old and new methodologies with reasonable statistical confidence.

Trusts were selected to participate based on trust size, trust response rate to previous Children and Young People's surveys, deprivation level (based on IMD of area), and previous CQC service ratings to ensure there was a good spread of trust types. It was also important to allocate the sample to new and old methodologies within trusts to control for variability in trust characteristics.

2.1.2 Drawing the pilot samples

Trusts drew patient samples using largely the same protocol as for the mainstage survey (the only deviation being the inclusion of mobile numbers where available). This meant patients were eligible for the survey if they were admitted to hospital; were aged between 15 days and 15 years (inclusive) at the time of their discharge; and were not obstetrics / maternity or psychiatry patients, or babies where the mother was the primary patient or who were only admitted to the Neonatal Intensive Care Unit (NICU) or Special Care Baby Unit (SCBU). As is done for the mainstage, trusts displayed posters during the sampling month, to ensure patients had the opportunity to opt out of their details being shared for the purpose of the survey.

All patients in the sample were run through the Demographic Batch Service (DBS), to ensure that any patients registered as deceased since their discharge would be removed.

The sample was stratified by trust, title, and postcode before being split equally into two groups – a control and an experimental group.

The experiment group was split into two further groups in order to test the wording around long term conditions (LTCs). Early evidence from the Adult Inpatient Pilot suggested that the way in which the LTCs questions were presented online impacted on patient self-classification. Those responding online were less likely to report having a long-term condition than those completing on paper, perhaps influenced by their inability to see the follow up question with the full list of conditions. In order to investigate this further, parents in experiment group 1 were shown the following question in the online survey (matching the paper survey): “Does your child have any physical or mental health conditions, disabilities or illnesses that have lasted or are expected to last for 12 months or more?” If they chose ‘yes’, they were routed to follow-up questions about which LTC(s) their child has and presented with a list of conditions to choose from; if they chose ‘no’, they were moved on to the next section of the survey.

In experiment group 2 parents were shown the combined question “Does your child have any of the following? (Select ALL conditions that have lasted or are expected to last for 12 months or more)” with a list of LTCs from which they could choose. Comparison of the responses made it possible to infer whether allowing people to see the LTCs, while they are answering, increases the number of participants reporting LTCs.

Participants responding to the online survey were randomly assigned to the experiment groups, to ensure there were equal numbers completing the different LTC questions.

2.2 Data collection methods

The pilot sample (n = 20,748) was randomly allocated to two groups, with the following contact protocols.

1. A **control group** (n = 10,374) that received three paper mailings with questionnaires included in the first and third mailing, as in the current mainstage survey.

2. **Experimental group** (n = 10,374) that received four mailings (with a paper questionnaire included only in the third mailing), and an SMS reminder after each mailing that did not include a paper questionnaire (the first, second and fourth mailings).

These two groups were then assessed across the sample variables provided, including age, gender, ethnicity, and ICD-10/11 codes, to ensure there was an equal split across both groups.

Table 2.1: Methodology of Control and Experiment groups

Mailing	Control	Experiment
M1 (Week 1)	Letter with paper questionnaire	Letter with URL
SMS1 (+3 days)	N/A	SMS after M1
M2 (Week 2)	Letter	Letter with URL
SMS2 (+3 days)	N/A	SMS after M2
M3 (Week 4)	Letter with paper questionnaire	Letter with URL and paper questionnaire
M4 (Week 6)	N/A	Letter with URL
SMS3 (+3 days)	N/A	SMS after M4

When designing the experimental contact protocol, there were several considerations:

Firstly, it was important to note that a secondary data collection mode, typically paper-based, is currently essential to increase response rates and reduce the forms of non-coverage and non-response bias typically observed in online surveys (which produce samples that are younger and less socially deprived than the population at large). However, to ensure a reasonably large proportion of the sample respond online rather than by post, the paper questionnaire is not included in early mailings.

In addition, the Patient Administration System (PAS) used as a sample frame includes mobile phone numbers for over 50% of patients, and therefore SMS reminders were incorporated into the contact protocol for those who had a mobile number available. This has been demonstrated to improve response rates in the 2018 Adult Inpatient Pilot Study[3], and Dillman – the world-leading authority on push-to-web survey methods – strongly recommends using additional contact modes where these are available. To maximise the effectiveness of the SMS reminders, they were carefully integrated with the postal reminders: timed to arrive a day or so after each letter, making explicit reference to the letter and including a direct link to the survey questionnaire, thereby bypassing the need for recipients to type in the URL.

Finally, research has demonstrated that, in general, web-led sequential mixed mode surveys deliver lower response rates than equivalent mail ones.

Fieldwork ran for 11 weeks from 10th February 2020 to 4th May 2020 and fieldwork timings for each group are summarised in the following table.

Table 2.2: Fieldwork timings for the Children and Young People's Survey pilot

Mailing	Control	Experiment
M1	10-Feb	10-Feb
SMS1	N/A	13-Feb
M2	17-Feb	17-Feb
SMS2	N/A	22-Feb
M3	2-Mar	2-Mar
M4	N/A	17-Mar
SMS3	N/A	20-Mar

2.3 Material design

In addition to piloting the mixed-mode methodology, the questionnaire and supporting materials were adapted to bring them in line with industry best practice and ensure they were appropriate for the experimental methodology. The updated questionnaire and materials were used in both

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[3] Although the likely net impact that including SMS reminders would have on overall response rates is unclear from the write-up: it appears that the reported response rate increase of 5-6% applied only to sample members for who mobile phones were available.

the experimental and the control sample groups to ensure that any difference in response rate could be attributed to the change in methodology rather than the materials.

2.3.1 Questionnaire

The 2018 CYP questionnaire was thoroughly reviewed and overall was well placed to be used for the CYP pilot, both in terms of individual questions and the overall length. A very small number of adaptations were necessary in order to make it suitable for an online survey. Full details on the questionnaire changes can be found in the appendices.

The online survey was set up to be device-agnostic, meaning that it could be used on a variety of devices, such as mobile phones, tablets and desktops. Parents were able to either click the link provided in the SMS reminders, or log-in using the details provided in their letter.

2.3.2 Supporting materials

The survey materials must provide patients with the relevant survey information in an easily accessible format. Furthermore, the materials must tap into different motivations for completing the survey, to encourage as many patients to participate as possible. For the Children and Young People's pilot, the following materials were reviewed and refined, or developed:

- Covering letters: consisting of an initial invitation letter and three further reminder letters (these were designed to be similar to the current letters – e.g. still signed by the trust – but optimised for the push-to-web methodology)
- Information leaflet: designed for children and young people, to provide answers to FAQs
- Text for the SMS reminders: three versions to be sent shortly after each letter (where mobile phone numbers were available)
- Dissent poster: to be displayed in hospitals prior to fieldwork

Copies of all materials are included in the appendix.

Our starting point for developing these materials was to review the materials that were used for the mainstage Children and Young People's Survey. While many of the existing features of the materials were retained, it was necessary to adapt the content to reflect the mixed-mode methodology.

Following the re-development of the materials, they were cognitively tested with children and young patients (and parents of patients) to explore:

- The extent to which the messages used in the materials were engaging, persuasive, and ultimately likely to secure participation in the survey
- The extent to which the content of the materials was comprehensive, and whether there was any additional information required by participants
- Understanding of the language used, focusing on the more complex elements (e.g. confidentiality)

- The layout of the materials, to understand which elements participants were most drawn to/likely to read and to understand if any key information was being overlooked
- The extent to which the content and design of the materials were appropriate for children and young people.

2.4 Analysis

2.4.1 Data cleaning

Before analysis commenced, data were cleaned according to the same rules as the mainstage survey. For more information on this please refer to the 2018 mainstage survey documentation[4]. However, where multiple completes for one individual were provided, the online survey was given priority, followed by the most complete paper survey. There were 67 cases where more than one response was received for an individual.

Only minimal cleaning was necessary for the data from the online questionnaire. This is because routing was automated, and multi-coding was disabled at single-code questions and for incompatible responses at multi-code questions.

2.4.2 Weighting

Data was weighted according to current Co-ordination Centre specifications, as agreed with the CQC. In order to allow testing of the weighting strategy to happen prior to final data being available, the CQC provided historical data to identify any difference in weights supplied by Picker Institute Europe and weights calculated by Ipsos MORI on the same dataset. The weights were replicated exactly.

2.4.3 Regression analysis

Regression analysis was used to model the data to gain a better understanding of the relationship between a key outcome (e.g. response rate) and experimental variables. The models were used to:

- identify which characteristics have the strongest relationship with the outcome variable, once other factors have been accounted for: and
- take account of socio-demographic differences between the control and experimental groups (including year of birth, gender, ethnicity, treatment function code, ICD-10 Chapter Code, IMD quintile, and trust).

2.4.4 Fourth mailing analysis

To analyse the impact of the fourth mailing, due to its impact on the potential affordability of the approach, categories for each mailing were created, based on:

- date of online survey completion (for those who completed online); and

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[4] CQC, (2018*), 2018 Children and Young People's Patient Experience Survey: Quality and Methodology Report*, Accessed at: https://nhssurveys.org/wp-content/surveys/01-children-patient-experience/04-analysis-reporting/2018/Quality%20and%20Methodology%20Report.pdf

- date of paper survey receipt (for those who took part using the paper survey).

To account for the time taken for postage, the dates of postal surveys were adjusted to improve comparability with the online survey. Dates of receipt for the postal survey were adjusted by three days (e.g. 18th February would become 15th February), to provide a better estimate of when the survey was completed.

3 Response rate analysis

Response rate comparability is one the key areas needed to assess the feasibility of moving the CYP study to a mixed-mode approach. This is particularly key because push-to-web surveys often have lower response rates than postal surveys.

In order to conduct response rate analysis, adjusted response rates were calculated according to the same rules as the mainstage survey (as shown in Table 3.1 below).

3.1 Overall response rate

An independent samples t-test to compare outcomes in the experimental group and the control group demonstrates no statistically significant difference between the experiment group (28.1%) and the control group (27.0%) at an overall level. Additionally, regression analysis was conducted, controlling for gender, age, ethnicity and trust, which showed there was no significant difference in overall response rate between the control and experimental group ($p<0.05$, OR=1.063).

Table 3.1: Response rates[5] (on a base of eligible cases) by experimental group

	Control		Experiment group	
Issued	**10,374**	**100%**	**10,374**	**100%**
Undeliverable[6]	99	1.0%	433	4.2%
Other ineligible[7]	9	0.1%	10	0.1%
Issued (eligible)	**10,266**	**100%**	**9,931**	**100%**
Opt-out	10	0.1%	19	0.2%
No response	7482	72.9%	7120	71.7%
Complete	**2774**	**27.0%**	**2792**	**28.1%**

When broken down by age group, no statistically significant differences were observed between the experiment and the control groups in profile, although the response rate for the 0-7 age group was significantly higher (28.5% in the experiment group, compared with 26.2% in the control group).

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[5] Response rates calculated after removing ineligible cases (e.g. invitation undelivered or removal on death) from the base.

[6] ‘Undeliverable’ includes mailings returned to sender or where SMS failed to send.

[7] ‘Other ineligible’ includes those who were removed following DBS or other local checks, or who were ineligible to take part.

Table 3.2: Adjusted response rate by age group

	Control (n=10,266)	Experiment (n=9,931)
Overall adjusted RR	27.0%	28.1%
0-7	26.2%	**28.5%***
8-11	28.0%	26.7%
12-15	28.0%	28.5%

* Indicates statistically significant difference compared to the control group at 5% significance level.

3.1.2 Impact of SMS reminders on overall response rate

SMS reminders were incorporated into the contact regime for the experiment group so that participants with a mobile number in the sample received SMS reminders after each mailing (which did not include a paper questionnaire). Results show that for the experiment group, those with a mobile number had a significantly higher response rate compared with those without a mobile number. In contrast, those with a mobile number in the control group had a significantly lower response rate compared with those without a mobile number.

Table 3.3: Overall adjusted response rate by availability of mobile number

	Control (n=10,266)	Experiment (n=9,931)
Mobile number in sample	24.0%	**34.7%***
No mobile number in sample	29.0%	**24.2%***

* Indicates statistically significant difference compared to the control group at 5% significance level.

It is important to note that some trusts did not provide mobile phone numbers within the sample due to uncertainty about whether it was the child/young person’s phone number or whether it was their parent’s phone number. For more details on this, please see Chapter 4.

As shown in the following table, this higher response rate for those with a mobile number (in the experiment) remains across age groups. By contrast, in the control groups, those without a mobile number have a significantly higher response rate in the 0-7 and 12-15 age categories.

Table 3.4: Overall adjusted response rate by availability of mobile number and age

		Overall adjusted RR		
Age		**Mobile number in sample**	**No mobile number in sample**	**Difference**
0-7	Control	**23.2%*** (n = 2,476)	28.6% (n=3,163)	-5.4%
	Experimental group	**34.9%*** (n=2,318)	23.8% (n=3,149)	11.1%
8-11	Control	27.4% (n=741)	28.2% (n=1,470)	-0.8%
	Experimental group	**33.6%*** (n=651)	23.7% (n=1,473)	9.9%
12-15	Control	**23.3%*** (n=797)	30.3% (n=1,619)	-7.0%
	Experimental group	**35.3%*** (n=728)	25.4% (n=1,612)	9.9%

* Indicates statistically significant difference compared to those without a mobile number at 5% significance level.

3.2 Online response rate

The mixed-mode methodology successfully pushed the experimental group online, with 69.8% of the experimental group who took part, using the online mode for completing the survey.

Those with a mobile number are also more likely to take part online. This may reflect the success of the mobile invitation but may also reflect that those without a mobile number on the system may be less comfortable using online methods.

Table 3.5: Proportion of online and paper returns

	Experiment (n=2,792)
Paper	30.2%
Online	69.8%
Total	**100%**

Table 3.6: Proportion of online and paper returns by whether or not a mobile number was present

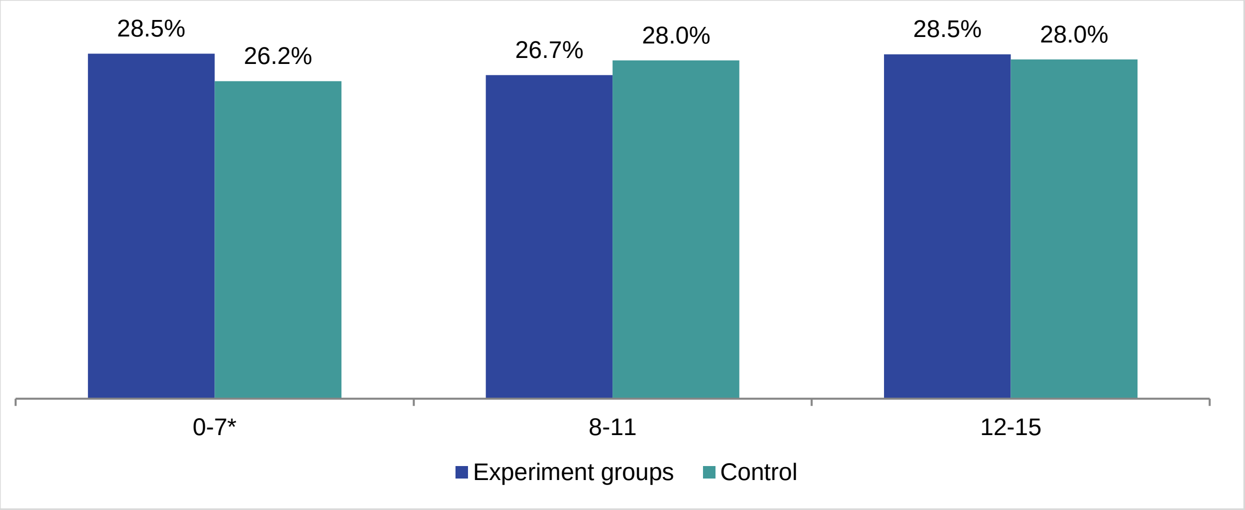
	Experiment (n=2,792)
Mobile number in sample – Proportion of returns completed online	78.4%
No mobile number in sample - Proportion of returns completed online	62.5%

3.3 National demographic profile

The experiment group achieved significantly higher response rates than the control group across some demographic groups of interest including age (0-7 year olds), BAME patients, some admission methods and patients in the most deprived areas. There were no significant differences observed for gender.

As shown in the figure below, the experimental group achieves higher response rates among younger children (0-7 years) than the control, with no significant differences for the 8-11 or 12-15 age groups.

Figure 3.1: Overall adjusted response rate by age



* Indicates statistically significant difference to compared to the control at 5% significance level.

The experiment group also shows a significantly higher response rate among BAME patients as shown in the following table.

Table 3.7: Overall adjusted response rate by ethnicity

	Control (n=10,266)	Experiment (n=9,931)
White British	28.1%	28.0%
BAME	23.5%	**28.5%***
Not stated	29.7%	27.7%

* Indicates statistically significant difference compared to the control at 5% significance level.

Across IMD quintiles 1 and 2, response rates were significantly higher in the experiment group compared with the control group. However, these were lower for IMD quintile 5. This means there is less variation in response rate by IMD quintile, which is better for avoiding non-response bias. This is demonstrated in the following table.

Table 3.8: Overall adjusted response rate by IMD quintile

	Control (n=10,214)	Experiment (n=9,882)
1 - 20% most deprived	18.4%	**24.5%***
2	21.7%	**25.5%***
3	27.4%	29.6%
4	31.6%	29.1%
5 – 20% least deprived	37.2%	**32.1%***

* Indicates statistically significant difference compared to the control at 5% significance level.

Significant differences were observed according to admission method between the experiment and control groups. The response rate was significantly higher for the experiment group among admission method 21 (admitted via Accident and Emergency), 23 (Emergency admission: Bed bureau) and 81 (Other admission). The response rate for the experiment group among admission method 2B was significantly lower than the control group (transfer from another hospital in an emergency). This is demonstrated in the table below.

Table 3.9: Overall adjusted response rate by admission method

Admission method	Control (n=10,266)	Experiment (n=9,931)
11 (Elective Admission: Waiting list)	30.4%	31.0%
12 (Elective Admission: Booked)	27.3%	27.5%
13 (Elective Admission: Planned)	29.8%	28.0%
21 (Emergency Admission: A&E)	25.2%	**27.7%***
22 (Emergency Admission: GP)	26.3%	27.3%
23 (Emergency Admission: Bed Bureau)	18.2%	**30.4%***
24 (Emergency Admission: Consultant clinic)	36.3%	35.6%
28 (Emergency Admission: Other means)	20.7%	26.2%
2A (Emergency Admission: A&E – other provider)	26.6%	30.0%
2B (Emergency Admission: Transfer)	30.8%	**12.7%***
2D (Emergency Admission: Other emergency)	26.3%	23.0%
81 Other admission: Transfer)	14.3%	**35.6%***
82 (Other admission: Birth of baby in this healthcare provider)[8]	50.0%	0.0%
83 (Other admission: Birth of baby outside this healthcare provider – except intended home-birth)[9]	0.0%	0.0%

* Indicates statistically significant difference compared to the control at 5% significance level.

However, many of these differences in response rate do not impact on the profile of participants, due to the spread of these participants in the sample. For example, many of the admission methods showing impact on the response rate make up such a small section of the sample, that the response rate difference does not impact the profile. As can be seen in the table below, the only two that show statistically significant differences in profile are differences that are less than half a percentage point.

Table 3.10: Profile of participants who responded to the pilot by admission method

Admission method	Control (n=2,774)	Experiment (n=2,792)
11 (Elective Admission: Waiting list)	21.7%	22.2%
12 (Elective Admission: Booked)	6.2%	5.9%
13 (Elective Admission: Planned)	14.0%	12.6%
21 (Emergency Admission: A&E)	35.0%	36.6%
22 (Emergency Admission: GP)	12.2%	11.7%
23 (Emergency Admission: Bed Bureau)	1.2%	1.8%
24 (Emergency Admission: Consultant clinic)	1.3%	1.1%
28 (Emergency Admission: Other means)	1.6%	2.0%
2A (Emergency Admission: A&E – other provider)	0.6%	0.9%
2B (Emergency Admission: Transfer)	0.7%	**0.3%***

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[8] This relates to babies born at the trust who were eligible for the survey but had not been discharged since their birth before receiving care outside the NICU/SCBU unit.

[9] This relates to babies born at the trust who were eligible for the survey but had not been discharged since their birth before receiving care outside the NICU/SCBU unit.

2D (Emergency Admission: Other emergency)	5.1%	4.4%
81 Other admission: Transfer)	0.2%	**0.6%***
82 (Other admission: Birth of baby in this healthcare provider)	0.0%	0.0%
83 (Other admission: Birth of baby outside this healthcare provider – except intended home-birth)	0.0%	0.0%

* Indicates statistically significant difference compared to the control at 5% significance level.

Differences are still visible in the profile when looking at ethnicity and IMD quintile – both making the results more representative of the target population. The experiment group includes a higher proportion of BAME respondents and a lower percentage of those who chose not to provide their ethnicity. Additionally, the experiment group contains a higher proportion from the most deprived quintile and a lower proportion of those in the least deprived quintile than the control group. Those from BAME backgrounds and deprived areas are currently underrepresented in the results of the CYP survey.

Table 3.11: Profile of participants who responded to the pilot

		Control (n=2,774	Experiment (n=2,792)
Age	0-7	53.3%	55.8%
	8-11	22.3%	20.3%
	12-15	24.4%	23.9%
Gender	Male	56.6%	56.2%
	Female	43.4%	43.8%
Ethnicity	White British	58.7%	56.7%
	BAME	25.3%	**29.6%***
	Not stated	16.0%	**13.7%***
IMD quintile	1 - 20% most deprived	14.3%	**17.5%***
	2	17.7%	19.2%
	3	18.6%	19.6%
	4	22.9%	20.7%
	5 - 20% least deprived	26.6%	**23.0%***

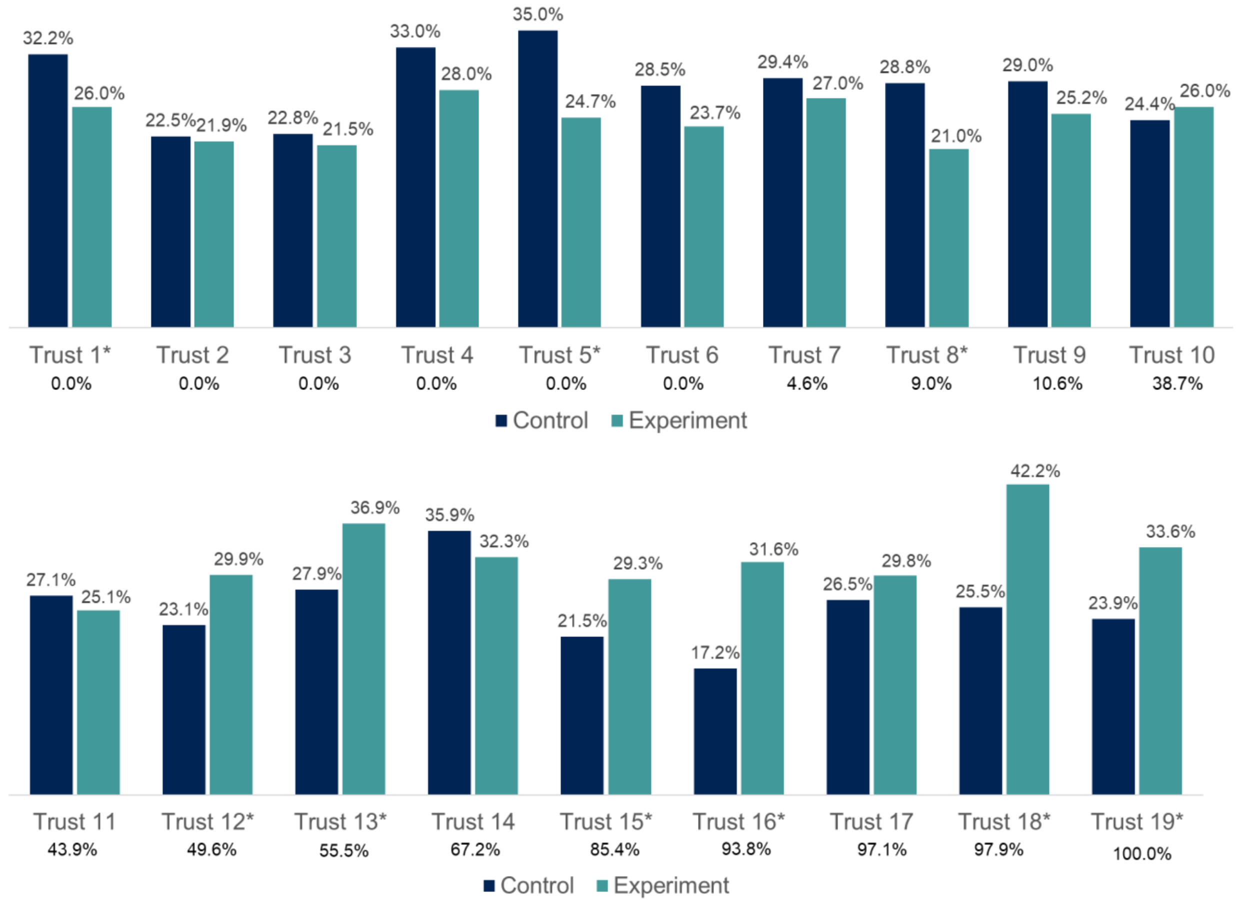
* Indicates statistically significant difference compared to the control at 5% significance level

3.4 Response rates at trust level

Looking at trust level data, response rates for the experiment and control groups are varied, as demonstrated in the chart below. The response rate for the experiment group was significantly higher in six trusts. The response rate for the control group was significantly higher than the experiment group in three trusts.

It is important to note that the response rate was impacted by the availability of mobile phone numbers. All of the trusts with a significantly higher response rate in the control group had less than 10% mobile numbers and all the trusts with a significantly higher response rate in the experiment group had around 50% or more mobile numbers. Figure 3.2 (below) shows the response rates by trust in order of the percentage of mobile numbers available (the percentage of mobile numbers included in the sample are listed below the trust identifier).

Figure 3.2: Response rates by trust (with percentage of mobile numbers)



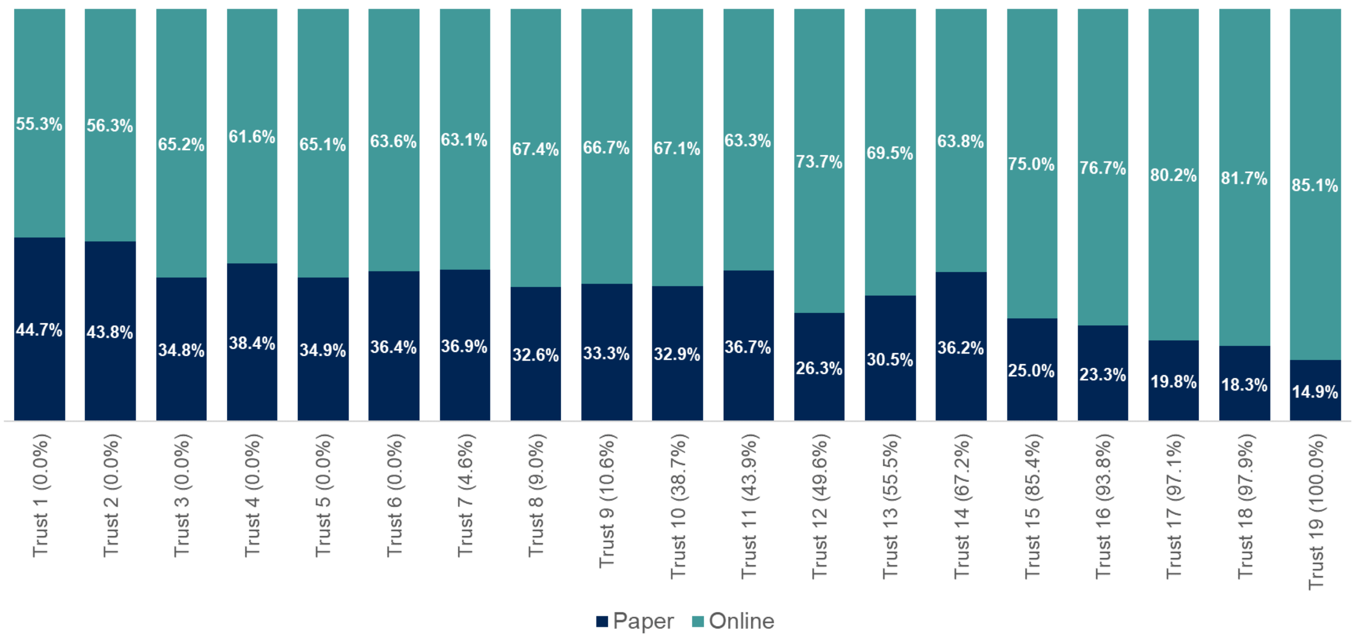
3.5 Percentage taking part online

When looking at trust level data, the mixed-mode methodology was again effective at pushing the experiment group online. This is consistent with the national level results.

In all apart from two trusts, significantly more people in the experiment group completed the survey online. In general, trusts with more mobile numbers tended to have higher percentages taking part online – for example only 64.6% took part online in the trusts with less than 50% mobile numbers, and this increased to 77.4% for those with more than 50% mobile numbers.

This therefore confirms the importance of obtaining mobile numbers for all participants in the sample as while Push to Web is effective at pushing people online, this can be at the expense of the overall response rates unless SMS reminders are employed. The SMS reminders also encourage people to take part online, increasing the cost effectiveness of the survey.

Figure 3.3: Online response by trust (with percentage of mobile numbers provided)



3.6 Response by demographic group

There is more variation in response rates by demographic groups at the trust level due to the smaller sample sizes compared with the national level.

When analysing ethnicity, the national response rate amongst BAME patients was higher in the experiment group than the control group. Higher response rates amongst BAME participants were also seen in the experiment group in five trusts. However, it should be noted that it was also significantly lower in two trusts. Across the trusts, the average difference in the BAME response rate between the experiment and the control group is +5 percentage points.

The results are also more varied at trust level across IMD quintiles. Six trusts show higher response rates across all IMD quintiles in the experiment group compared with the control group, whilst ten trusts show significantly higher response rates across all IMD quintiles in the control group compared with the experiment group.

Whether or not participants had a mobile phone also has an impact on the likelihood to respond at a trust level. The average difference in response rates for those with a mobile number between the experimental group and the control group is +6 percentage points, whilst the average difference for those without a mobile number is –4 percentage points. These findings suggest that the SMS reminders boost response rates at a trust level, in line with the national level result and confirm the importance of obtaining mobile numbers in order to limit variation.

4 Feedback from trusts on sharing mobile numbers

As discussed in the previous chapter, the presence of a mobile phone number is an important factor in the feasibility of a move to a mixed-mode methodology. Of the 19 trusts who took part in the pilot, six trusts did not provide any mobile phone records and a further three provided numbers for between c4-11% of their patients. The presence of a mobile phone number has a significant impact on response rates, so it is important to understand the barriers facing trusts in providing these records.

The reason most commonly cited by trusts was that the sampling guidance note stated that the mobile phone numbers provided must be that of the parent or guardian and not the child's. Trusts commented that there is currently no way of recording whose number is listed within their database, and without this flag it becomes difficult to export the data with any confidence. Some trusts had made the decision to provide no numbers on this basis, while others had decided to exclude "patient" numbers and only provide secondary numbers recorded in the work/home field. One trust had taken the pragmatic decision to only provide mobile phone numbers for children aged eight and under.

One trust stated that they had concerns over information governance and only provided numbers "verified as an Authorised Recipient of patient data who was flagged as Next of Kin and having Parental Responsibility for the patient".

Several trusts commented that the quality of numbers recorded within their database was variable. This is something that CQC may wish to consider going forward across the NPSP, and whether it's possible to encourage trusts to start collecting contact information in a more systematic way.

The chair of the ethics committee has considered the ethical issues around trusts potentially providing the mobile phone numbers of young people and does not consider this to be an issue. From an ethical point of view, if the parent and/or child has provided the child's phone number then this is the number that should be used and respected. Provision of the number is consent to use the number for legitimate reasons – and the CYP survey will be a legitimate use as confirmed by the Section 251 approval from the Confidentiality Advisory Group (CAG).

These findings are an important learning point from the pilot and will need to addressed when transitioning the mainstage CYP study to a mixed-mode approach. We recommend that the following steps are taken to maximise the number of mobile phone records included within trust samples:

- **Ethical guidance** – seek a formal note from the ethics committee outlining their advice on the sampling instructions and the ethics around potentially having minors' telephone numbers included within the sample

- **Sampling guidance document** – amend the sampling instructions to instruct trusts to include the mobile phone number associated with the patient record. Provide details of the ethical review and guidance on this issue, along with details of the section 251 application.

- **Sample declaration form** – adding a section to the form asking trusts to confirm the number of mobile phone numbers they are submitting. This will allow contractors to identify at an early stage any issues and, if necessary, to liaise with trusts around the issue.

5 Impact of the fourth mailing

5.1 Summary of national level analysis

5.1.1 Impact of the fourth mailing on overall response rate

As discussed in the previous chapter, the experimental approach (28.1%) achieved a higher response rate than the control group (27.0%). However, this approach includes four mailings which is a key driver of cost, and may affect the affordability of a mixed-mode approach. Therefore, it is important to understand the impact of the fourth mailing, and whether a three mailing approach would be feasible.

Excluding fourth mailing completes, a standard t-test showed the experimental group achieved a significantly lower response rate than the control (21.6% compared to 27.0%).

Table 5.1: Overall adjusted response rate excluding fourth mailing completes

	Control (n=10,266)	Experiment (n=9.931)
Overall adjusted RR	27.0%	21.6%

As discussed in the following section, 23.3% of the total returns (650 individual responses) were received after the fourth mailing for the experimental group. This demonstrates the importance of the fourth mailing in increasing response rates for the experimental group.

In the experimental group, those trusts that provided mobile numbers for more than half of participants saw a response rate (after three mailings) of 25.5%, similar to the control group’s overall response rate after three mailings (27.0%). This suggests that if, going forward, trusts are able to provide mobile numbers for more than half of their sample, the response rate could be maintained at a level similar to that of past paper surveys, using only three mailings. The average percentage of mobile numbers provided for trusts that provided more than 15% mobile numbers was 72.9% - which suggests that this is feasible if the concerns of those trusts providing no mobile numbers or only very low levels of mobile numbers, can be addressed.

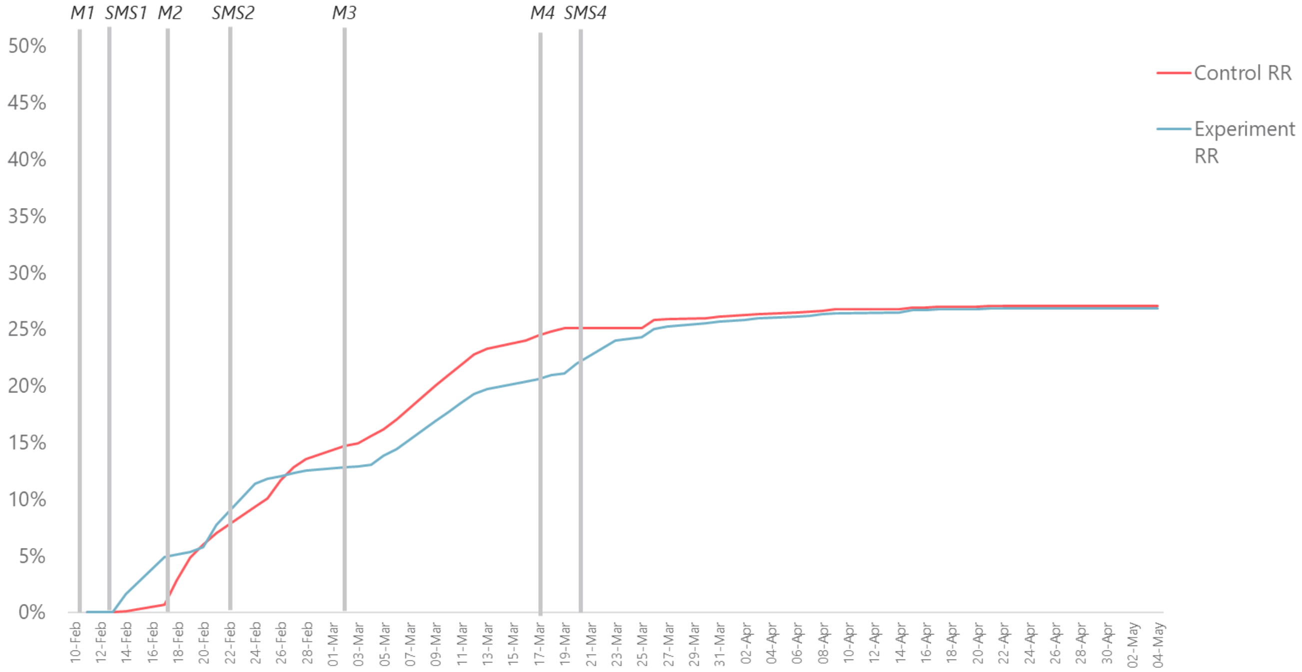
Table 5.2: Cumulative response rate by mailing

	Control (n=10,266)	Experiment (n=9,931)
M1	13.3%	5.3%
M2		13.5%
M3	27.0%	21.6%
M4	N/A	28.1%

Table 5.3: Proportion of completes by mailing

	Control (n=2,774)	Experiment (n=2,792)
M1	49.1%	18.7%
M2		29.2%
M3	50.9%	28.8%
M4	N/A	23.3%
Overall	100%	100%

Figure 5.1: Graph of response rate over time during fieldwork by control and experiment groups



5.1.2 Impact of the fourth mailing on online response rate

Online completes received following the fourth mailing account for 22.3% of the total online completes, and 15.5% of all responses in the experimental group (including both online and paper). Of those who responded prior to the fourth mailing, 29.2% used the paper form, while 70.8% completed the online survey. Taking into account the fourth mailing, the ratio changes to 30.2% paper, to 69.8% online; these differences are not statistically significant. This indicates that while the fourth mailing is successful in increasing the number of responses, the breakdown of paper v online completion is not affected.

Table 5.4: Online and paper adjusted response rates excluding fourth mailing completes

	Experiment (n=9,931)
Paper	6.3%
Online	15.3%
Overall	21.6%

5.2 Impact of the fourth mailing on respondent demographics

Overall, the fourth mailing had little impact on respondent demographics, with the exception of ethnicity.

Those who responded to the fourth mailing were more likely to be from BAME groups (34.9% of completions compared with 28.0% in mailings one to three). As a result, the percentage of those from BAME groups in all four mailings was 1.6 percentage points higher than the first three on their own (29.6%) – as shown in Table 5.7.

However, the experiment group received responses from a significantly higher percentage of those from BAME groups, even when the fourth mailing was removed. Only 25.3% of those in the control group were from BAME groups, which is significantly lower than the first three mailings from the experiment group (28.0%), as well as all four mailings (29.6%).

Overall, although the response rates were lower without the mailing (as shown in Tables 5.5 and 5.6), the demographic split was still similar to the experiment group with four mailings and more representative than the control mailing by ethnicity and IMD score (as shown in Table 5.7).

Table 5.5: Overall adjusted response rate by ethnicity (for three mailings only)

	Control (n=10,266)	Experiment (three mailings) (n=9,931)	Experiment (four mailings) (n=9,931)
White British	28.1%	**22.1%***	28.0%
BAME	23.5%	**20.7%***	**28.5%***
Not stated	29.7%	**21.2%***	27.7%

* Indicates statistically significant difference compared to the control at 5% significance level.

Table 5.6: Overall adjusted response rate by IMD quintile (for three mailings only)

	Control (n=10,214)	Experiment (three mailings) (n=9,882)	Experiment (four mailings) (n=9,882)
1 - 20% most deprived	18.4%	18.6%	**24.5%***
2	21.7%	19.4%	**25.5%***
3	27.4%	**22.1%***	29.6%
4	31.6%	**22.4%***	29.1%
5 – 20% least deprived	37.2%	**25.6%***	**32.1%***

* Indicates statistically significant difference compared to the control at 5% significance level.

Table 5.7: Profile of participants who responded to the pilot (for three mailings only)

		Control (n=2,774)	Experiment (three mailings) (n=2,142)	Experiment (four mailings) (n=2,792)
Gender	Male	56.6%	56.1%	56.2%
	Female	43.4%	43.9%	43.8%
Ethnicity	White British	58.7%	58.4%	56.7%
	BAME	25.3%	**28.0%***	**29.6%***
	Not stated	16.0%	**13.7%***	**13.7%***
IMD quintile	1 – 20% most deprived	14.3%	**17.3%***	**17.5%***
	2	17.7%	19.0%	19.2%
	3	18.6%	19.1%	19.6%
	4	22.9%	20.8%	20.7%
	5 - 20% least deprived	26.6%	**23.9%***	**23.0%***

* Indicates statistically significant difference compared to the control at 5% significance level

5.3 Impact of the fourth mailing on question responses

There is very little variability in the question responses within the experiment group between mailings 1-3 and 1-4. The largest (though still not significant) difference between these two groups was 1.7 percentage points, in relation to question 59/60, about who completed the child/young person’s section of the survey. This suggests that including the fourth mailing does not have an impact on question responses.

6 Long-term condition question

Analysis of the Adult Inpatient Survey pilot showed that those who completed the questionnaire on paper were significantly more likely to report having a long-term condition than those who completed the questionnaire online. The question used was the standard long-term condition question used across all of the NPSP. The key difference between how the question is presented is that the online version does not allow participants to see the full list of long-term conditions until they have stated whether or not they have a long-term condition (i.e. the follow up questions), while patients completing the paper version can choose to look at the subsequent questions. The findings from the Adult Inpatient Study suggest that this difference may be caused by participants not realising they had conditions that are considered "long-term".

This hypothesis was tested during the Children and Young People's survey pilot: the experimental group was divided into two groups; when completing the survey online, participants in Group A were asked a two-part question in the same way as presented in the Adult Inpatients survey:

Q51: Does your child have any physical or mental health conditions, disabilities or illnesses that have lasted or are expected to last for 12 months or more?

Q52: Does your child have any of the following? (List of long-term conditions)

Group B was asked a combined experimental question:

Q51A: Does your child have any of the following physical or mental health conditions, disabilities or illnesses that have lasted or expected to last for 12 months or more? (List of long-term conditions)

The findings from the CYP pilot do not replicate those of the Adult Inpatient pilot, as there are no significant differences between group A (the two-part online question) (34.6%) and the control (35.7%). However, providing the combined online question (group B) significantly increases the proportion of patients reporting long-term conditions (41.6%), compared to both Pilot Group A (34.6%) and the control (35.7%). This suggests that allowing patients to see the full list of condition may prompt some to think about conditions they may not otherwise have considered.

Table 6.1: Responses to the long-term condition questions by experiment group and mode

% with LTC	Control (n=2627)	Experiment (n=2720)	Experiment paper (n=794)	Online only	
				Group A (n=949)	Group B (n=977)
Overall	35.7%	37.0%	34.3%	34.6%	41.6%
0-7	25.7%	29.1%	25.9%	27.5%	33.2%
8-11	44.3%	43.9%	39.9%	40.7%	49.8%
12-15	50.2%	49.8%	47.3%	46.9%	55.4%

There was also some variation between the different questions on reported conditions. However, the only statistically significant was for breathing conditions, such as asthma, which was reported by 18.3% of those in group A (who declared they had a long-term condition before being shown the list), but 33.3% in group B who were given the combined LTC question.

Table 6.2: Level of different long-term conditions by experimental group

% of those with a long-term condition reporting the following conditions	Control (n=1017)	Experiment (n=2720)	Experiment paper (n=297)	Online only	
				Group A (n=312)	Group B (n=406)
Blood disorder	3.6%	3.9%	3.7%	3.2%	4.7%
Bowel condition, such as Crohn's disease	8.8%	7.6%	8.1%	8.0%	6.9%
Breathing problem, such as asthma	23.5%	25.0%	20.9%	18.3%	**33.3%***
Blindness or partial sight	5.0%	4.8%	6.1%	4.8%	3.9%
Cancer in the last 5 years	6.1%	5.2%	5.7%	6.1%	4.2%

Chromosomal condition, such as Down's syndrome	6.2%	6.5%	7.4%	6.7%	5.7%
Deafness or hearing loss	5.4%	6.3%	6.4%	8.0%	4.9%
Developmental disability, such as Autism Spectrum Disorder (ASD)	17.3%	14.8%	18.9%	14.7%	11.8%
Diabetes	3.3%	3.2%	2.0%	3.2%	3.9%
Heart problem	9.4%	8.8%	8.4%	8.0%	9.6%
Joint problem	6.4%	7.9%	7.4%	7.4%	8.6%
Kidney or liver disease	4.6%	3.2%	3.0%	3.8%	2.7%
Learning disability	14.9%	15.1%	17.8%	13.8%	14.0%
Mental health condition	7.7%	8.0%	9.4%	8.3%	6.7%
Neurological condition, such as epilepsy	12.6%	14.0%	14.1%	15.7%	12.6%
Another long-term condition	37.6%	35.3%	37.7%	38.1%	31.3%

* Indicates statistically significant difference compared to Group A at 5% significance level

A follow-up question was asked of those who said their child had a long-term condition, to understand to what extent the condition may reduce their child's ability to carry out day to day activities.

Across the control and group A, a similar pattern of response is evident for every response option (see Table 6.3), suggesting that there is no mode response for how patients answer this question. However, those in group B (combined question) were significantly less likely to report that the condition affected their child's day to day activities a lot (23.7%) compared with the control (31.8%) and group A (32.1%), and more likely to state that it did not impact their child's ability to carry out day to day activities at all (35.8%).

This indicates that the use of a combined LTC question has increased the proportion of patients identifying as having a long-term condition but these conditions are less likely to be affecting their day to day lives.

Table 6.3: Impact of long-term condition on day-to-day life by experiment group and mode

% with LTC	Control (n=921)	Experiment (n=992)	Experiment paper (n=260)	Online only	
				Group A (n=327)	Group B (n=405)
Yes, a lot	31.8%	30.3%	38.5%	32.1%	**23.7%***
Yes, a little	42.2%	40.3%	39.6%	40.7%	40.5%
No, not at all	26.0%	29.3%	21.9%	27.2%	**35.8%***

* Indicates statistically significant difference compared to Group A at 5% significance level

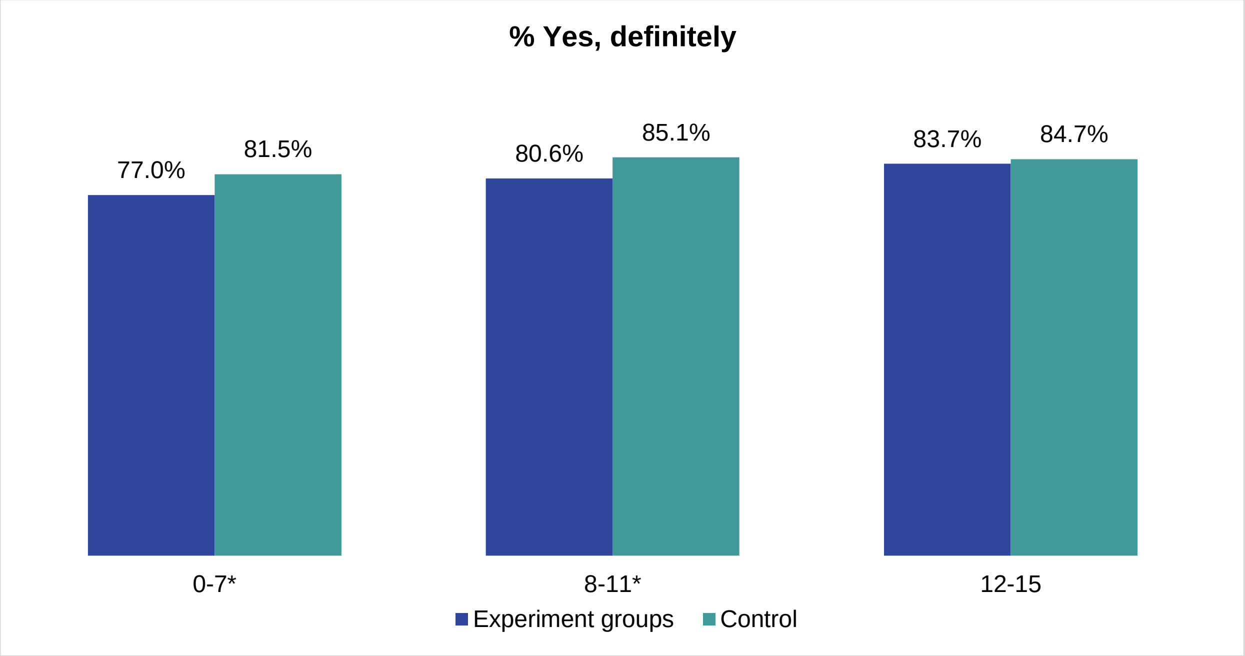
7 Question response analysis

7.1 National level

There is some variability in the question responses between the control group and the experiment group, most questions showing significant differences in at least one answer code. However, these significant differences are mainly seen in the questions asked of parents or guardians, rather than the questions asked of children and young people themselves.

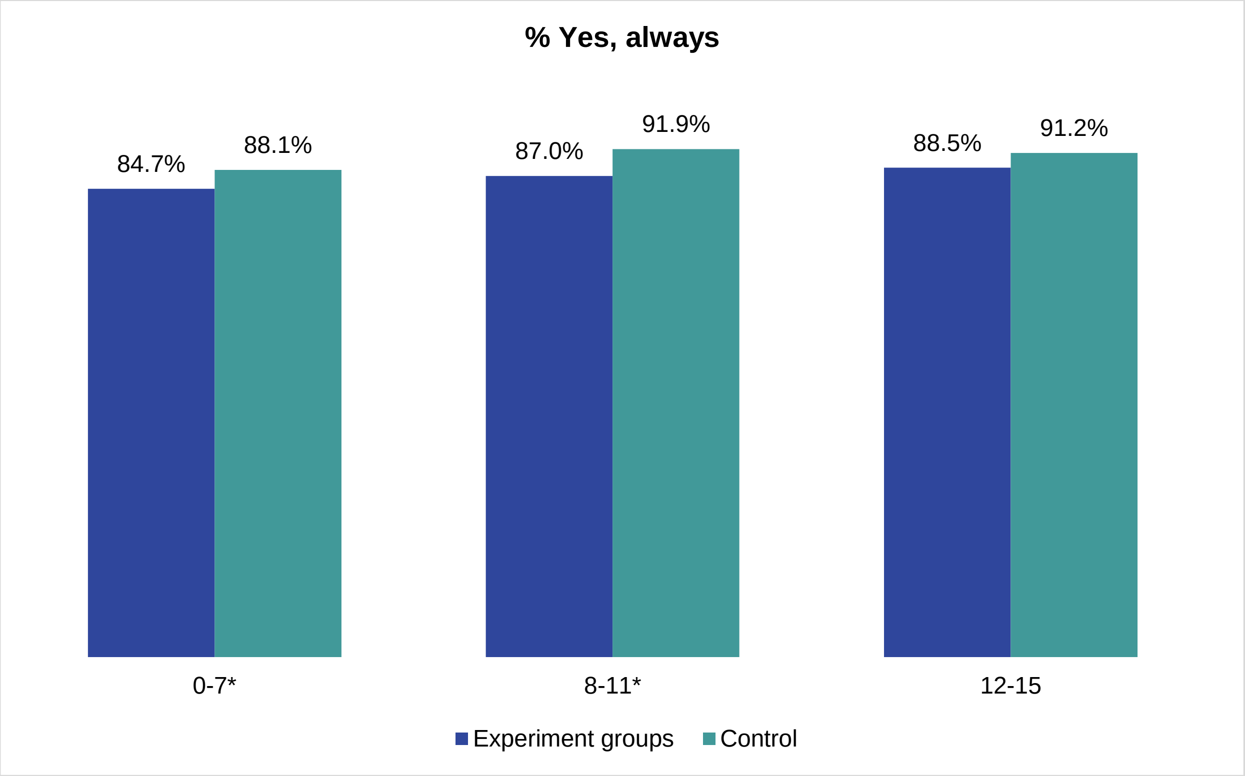
Across the parents' responses asked of all age groups, 26 answer codes show significant differences between the experiment and control groups (approximately 60% of all answer codes). These differences also do seem to indicate a trend towards more negative responses among the experiment group. This is similar to the pattern seen in the Inpatient Survey Pilot. This mainly was seen in a decrease in response to the most positive answer code (e.g. "Yes, definitely") and an increase those selecting the second most positive answer code (e.g. "Yes, to some extent"). For example, as demonstrated in the following charts (see Fig. 7.1 & 7.2), significantly fewer parents in the 0-7 and 8-11 age experiment groups definitely had confidence and trust in the staff members treating their child or felt that they were always treated with dignity and respect by the people looking after their children.

Figure 7.1: Did you have confidence and trust in the members of staff treating your child?



* Indicates statistically significant difference to compared to the control at 5% significance level.

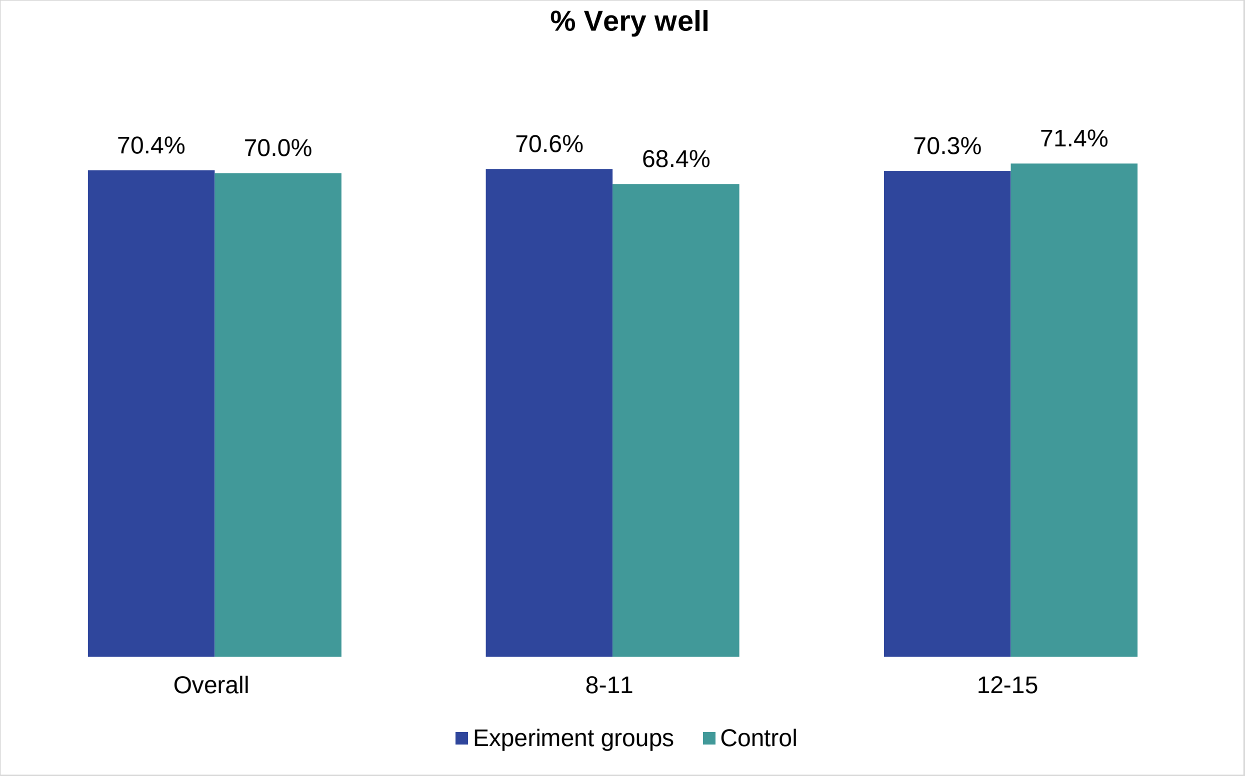
Figure 7.2: Were you treated with dignity and respect by the people looking after your child?



* Indicates statistically significant difference to compared to the control at 5% significance level.

The bias towards negative responses among parents/guardians was not evident in the children’s responses. Across the children’s responses, differences were a lot smaller, and these varied in direction, with some more positive in the control group and some more positive in the experiment group. As demonstrated below, there were no significant differences between the experiment and control groups regarding how well they thought they were looked after in hospital.

Figure 7.3: Overall, how well do you think you were looking after in hospital?



This suggests that question responses are broadly consistent across the control group and the experiment group for the children’s questions.

Overall, this suggests that the transition to a mixed-mode methodology would likely result in a break in trend data for the parent questions, but that trends could potentially be maintained for those questions asked of children and young people themselves.

7.2 Responses to questions at trust level

Due to the smaller sample size at trust level, there is much more variation in responses to questions at trust level than at national level.

Although the differences are relatively small, where we see consistent differences at national level (the bias towards negative views among the parent/guardians’ responses), these are generally evident at trust level as well. Additionally, where we have seen minimal change between the experiment and control groups at national level (particularly the children’s responses) this is also apparent at a trust level. In other words, the differences seen at national level are consistent at trust level.

This therefore suggests that the overall trend is consistent, even where there is variation between trusts, such as availability of mobile numbers.

8 Para data analysis

When conducting an online survey, a large amount of para data is available which, when analysed, can offer additional insight into how participants engage with the survey and help identify any potential problems. Overall, participants involved in the pilot seem to have found the survey straightforward to complete – it was generally done in one sitting and drop-off rates were low.

8.1 Dates and times of accessing the survey

Of online completions, the average (mean) length of time in the survey was 15 minutes, with a minimum of 3.5 minutes and a max of 3.5 hours. It is likely that a significant proportion of survey completion times are inflated by participants leaving the survey browser window open while completing other tasks (the median completion time was 11 minutes). The response rate and break-off rate suggest the current length is reasonable for completion online.

Of those who completed the survey online, the majority of participants did so in one go (87.7%). A further 9.3% accessed the survey twice and the remaining 3% of participants accessed the survey between three and six times.

The days with the most online responses submitted largely correspond to the SMS reminder dates (for example, 15.5% of online completes (328) were received on 14th February, the day of the first SMS reminder). However, not all of the online surveys were accessed via the SMS invite; 225 were completed using the link in the SMS and 103 were completed using the log-in details provided in the letter. This suggests that the SMS is working well at driving patients online and reinforcing the messaging within the letter.

Slightly smaller peaks were also seen alongside the letters that included online log-in details (for example 10.0% of the online completes (212) were received on 20 February, the day the second letter landed). There was a much smaller peak in online responses when the third mailing (without a text message) was sent out, with 109 responses received on the 4 and 5 March.

8.2 Online break-offs

Overall, of the 2,727 people who accessed the online survey, 77.5% went on to complete the survey. A further 614 accessed the survey but did not complete it online (22.5%) – 73 went on to complete via paper, whereas the remaining 541 did not complete at all. Of these, the majority accessed only the introduction page (125 people – around one in five).

No questions appear to have a particularly high drop-out rate. The only questions that resulted in ten or more participants dropping out were Q1 (14), Q2 (14) and the first question of section 2 for the parents, Q6 (10).

Break off rates for questions asked of children were particularly low. No more than ten participants dropped out at any question in the children's section.

8.3 Online survey access modes

The most popular device for accessing the online survey was via a mobile phone. Nearly three in five (59.5%) took part via their mobile phone, while a quarter (24.9%) took part via a desktop computer and 5.9% took part via a tablet. Of trusts where more than half of their sample had mobile numbers, 70.8% of online responses were completed on a mobile, compared with 49.8% where less than half of the sample had mobile numbers.

Three in ten (31.0%) of all those who completed the online survey did so via the link in the SMS, while seven in ten (69.0%) used the log-in details provided in the letter. Of trusts that provided mobile numbers for more than half their sample, 57.8% of responses were completed via the link in the SMS. This was only 10.3% for trusts who provided mobile numbers for less than half their sample.

The high percentage of mobile responses, even where participants were not using the SMS link, means it is important that any future survey be designed "mobile-first" to ensure participants can easily and comfortably take part on their device of choice[10].

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[10] For more details on "mobile first" design, see here: https://www.ipsos.com/ipsos-mori/en-uk/mobile-first-best-practice-guide

9 Conclusion

The findings from the pilot, alongside the stakeholder engagement work, will help to inform the key discussions across the future of the Children and Young People's Survey.

9.1 Is moving the Children and Young People's Survey 2020 to mixed-mode methodology feasible?

Overall, **the response rate of the experimental group (with four mailings) is similar to the control group** and uptake of the online survey has been successful, indicating that there appears to be an appetite for taking part online. Therefore, moving to mixed-mode methodology would not impact the sample sizes required, if four mailings could be maintained.

However, as previous experience has shown that an additional mailing is likely to lead to an increase in costs, it was also important to be able to maintain similar response rates with three mailings. Analysis has shown that this was achieved in trusts with at least 50% of mobile phone numbers. The feedback from trusts with low levels of mobile numbers suggests that providing higher levels of mobiles is feasible with a change in survey instructions and further engagement.

When looking at demographic variables available in the sample, **the mixed-mode group was either as representative or more representative when compared with the control group.** The experimental group had higher response rates from those from BAME groups and more deprived areas.

However, there were some differences in question responses, particularly of those questions asked of parents, that would likely lead to a break in trends.

Overall, this analysis was consistent at trust level as well as at the national level, which suggests moving to mixed-mode method would not impact trust comparability.

Therefore, it would be entirely feasible to move to a mixed-mode methodology for running the Children and Young People's Survey, as long as the break in trends could be accommodated and ensuring trusts were able to provide at least 50% mobile numbers.

9.2 Could trends be maintained following a move to a mixed-mode methodology?

As discussed above, responses and profiles were generally consistent across the experiment and control groups. However, the consistently more negative experiences described in the experimental group, particularly by parents, were consistent and significant, which would suggest that these are either due to different people taking part, or people providing different types of responses, due to the change in mode offered. As these were not adjusted for by the weighting, this suggests this could not be controlled for with weighting. Therefore, **this would suggest that a break in trends is likely to be necessary, following a move to a mixed-mode methodology, at least for parent or guardian responses.**

When taking into account the percentage of mobile numbers, for children there is no real difference between responses from trusts with more than 50% mobile numbers and trusts with less than 50% mobile numbers, when comparing the experiment and the control. However, for adults, we do see more differences between the experiment and control in the more than 50% mobile numbers trusts.

Therefore, it may be possible to maintain trends for children's questions, but particularly if there is a drive to include more mobile numbers from trusts, this will definitely not be possible for adults' questions. This also suggests that keeping the percentage of mobile numbers in the sample to more than 50% per trust will be important for ensuring comparability across trusts.

Although there do not appear to be differences in question responses based on the percentage of mobile numbers included for children, we do see larger differences in who is completing the children's section (with less children completing alone, where more mobile numbers are included).

9.3 Is the fourth mailing necessary for a move to mixed-mode methodology?

The fourth mailing increased the response rate but had limited impact on demographics and question responses. If trusts are able to provide a minimum of 50% of their records with mobile phone numbers, the response rate with three mailings should be consistent with current response rates using the paper only methodology. Thus, making a fourth mailing unnecessary.

If the decision was made to implement a fourth mailing, it would be important to ensure that it was cost effective, by allowing the overall sample size to reduce while maintaining the same number of responses.

9.4 Which is the most effective long-term conditions question?

Although no significant difference was seen between the paper and online completion for this survey, the combined question identified a higher percentage of those with long-term conditions. This was particularly the case for those whose long-term conditions did not significantly impact their day-to-day life, and for particular conditions, such as asthma.

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