

Digital exclusion in population screening programmes

Appendix 6

An Equality Impact Assessment of channel shift from printed media to online information within NHS England's population screening programmes

Appendix 6 - Digital Information Opinion Survey

As part of this assessment, Citizens Online created a simple online survey (5 to 10 minutes completion time), and sought to collect the views of:

- Health professionals
- People who have been invited to, or undergone screening
- Interested members of the public

SUMMARY FINDINGS

The survey was undertaken in order to investigate the feelings of interested and informed people, and to establish some points of importance relating to the Channel Shift proposals and their potential impact on the public and on the service. With a sizeable number of respondents (579) and a detailed dataset of responses that presents some consistent themes and messages, the survey is a helpful and solid piece of research that can inform this assessment and resulting actions and decisions. The survey analysis suggests that:

- There is a balance of responses, from those expressing unhappiness and concern to those expressing unqualified approval, with many people striking a balance between the advantages and the potential problems of the proposals.
- Far more women (466) than men (54) participated, and many more health professionals (479) than members of the public (100).
- 59 respondents (10%) said they are disabled.
- 39 respondents (7%) gave their race or ethnicity as other than White.
- 18 (3%) respondents said their sexual orientation was other than straight/heterosexual (17), or that their gender identity was not the same as that assigned at birth (1).
- There is little difference between demographic groups in the range of issues raised.
- When examined at sentence level, the detailed written responses were skewed towards those tagged as ‘con’,⁹⁵ reflecting the fact that those with concerns had generally more to write about than those who felt the proposal was a positive step.

⁹⁵ Roughly, expressing concern or opposition to the proposals; tags are further explained in the analysis below.

- Many people raised the issue of digital exclusion due to skills, confidence, connectivity and affordability. These were the most common themes of people's responses, though many other themes were cited.
- There were intersecting demographics that people expressed concern about, chiefly older people and some disabled people; but also, those who have poorer digital skills or poorer English language skills; those who live with poverty; and those who are in 'harder to reach' communities or locations. Few, if any, people suggested that the switch to digital information would be beneficial in addressing exclusion.
- A recurring theme was respondents reporting that *they themselves* are confident and regular internet users who would be comfortable with digital information but expressing concern for others (either in the general or referring to specific groups they are in contact with) who do not enjoy the same access or skill levels. So while this online survey by definition will not have been accessible to everyone, we can have confidence that most respondents were not simply thinking of their personal needs and abilities when they completed the survey.
- A theme within several responses was 'readiness' - the suggestion that the switch is a good idea in principle, but people are not quite ready for it yet.
- Accessibility and 'findability' were also frequently mentioned, with many respondents being concerned that digital information would be hard to access, find or re-find. The convenience of a paper leaflet was also frequently mentioned, though many people also mentioned digital formats as being more convenient and accessible.
- For those more in favour of a shift to digital, sustainability issues and cost-saving were most frequently referred to. Many people said that online information would be their preference and that is in some ways more convenient. The possibility of automatic translation via online language tools was also mentioned, which is balanced against many other respondents mentioning language capability as a digital exclusion risk.

"Within AAA we deal with patients who may struggle with online only info - some patients in this age group (65+) don't have access to online services and/or don't have any computer/ technical skills."

tags: accessibility, concern, exclusion

- Health screening practitioner, female, age 45-54; overall feeling: "Neutral"

RECOMMENDATIONS

Based on survey responses, which come from interested members of the public and from a large number of health professionals, ***a high degree of caution about Channel Shift to ‘online only’ information exists.***

Any Channel Shift should be accompanied by careful consideration of groups that are not online or find it difficult to get online and would be at risk of not receiving necessary information and potentially not able to make an informed choice about whether to attend an appointment.

These groups include:

- Older people
- People who are already poor and/or socially excluded
- Disabled people whose disabilities affect them in a way that makes it hard for them to complete tasks online
- Those who cannot get online, or choose not to be online for a variety of reasons

Survey respondents frequently mentioned the beneficial features of printed information leaflets:

- They are a helpful physical reminder to make an appointment
- People can write other notes and reminders on them
- They are easy to stick on the fridge
- They are easy to pass on to a friend or family member

In considering Channel Shift, services should consider ways in which online information could be supplemented with some form of digital reminder or notes system.

It seems that ***many of those with concerns about digital exclusion would be satisfied with a system where people have a choice and where multiple options remain available - including printed leaflets for those that need them.***

METHOD

The survey was hosted on Mentimeter⁹⁶ and was accessible via a public link. We are not aware of any digital accessibility or usability problems with the Mentimeter interface that might have prevented or dissuaded people from participating.

As well as being publicised on the PHE screening blog,⁹⁷ the survey was promoted on Citizens Online’s Facebook and Twitter accounts, through the Digital Inclusion Slack space which we run, and at events including PHE’s Screening Inequalities conference,⁹⁸ and the Royal College of Midwives annual conference.

The survey was open from 11th October 2019 to January 2020 (latest data downloaded 16th January). Respondents who had responded ‘N/A’ to the early question “What’s your interest?” had not completed any other questions either, so we removed these blank responses (n = 9), leaving **579** responses to the survey.

We then split the data into two sets, one for the personal and demographic data about the respondents and one for the opinion (sentiment) data. This separation allowed for examination and coding of the sentiment data without contamination with any personal information about the respondent. After the coding process was complete, we merged the data sets together again, and analysed the sentiment data according to the various demographic groups of interest.

Our survey analysis takes place in two main stages:

1. **The overview of the survey data:** the numbers and types of respondents, general demographic information and a summary of the *overall feeling* (in response to the question “*Overall how do you feel about changing from printed leaflets to online information?*”) that people reported about the Public Health England (PHE) proposals.
2. **The thematic sentiment analysis of the written responses** to the survey question “*What are your opinions on changing from printed leaflets to online information?*” where the themes and issues raised by respondents are explored.

⁹⁶ <https://mentimeter.com/>, accessed 21/01/2020.

⁹⁷ <https://phescreening.blog.gov.uk/2019/10/18/online-screening-information-leaflets-tell-us-your-views/>, accessed 21/01/2020.

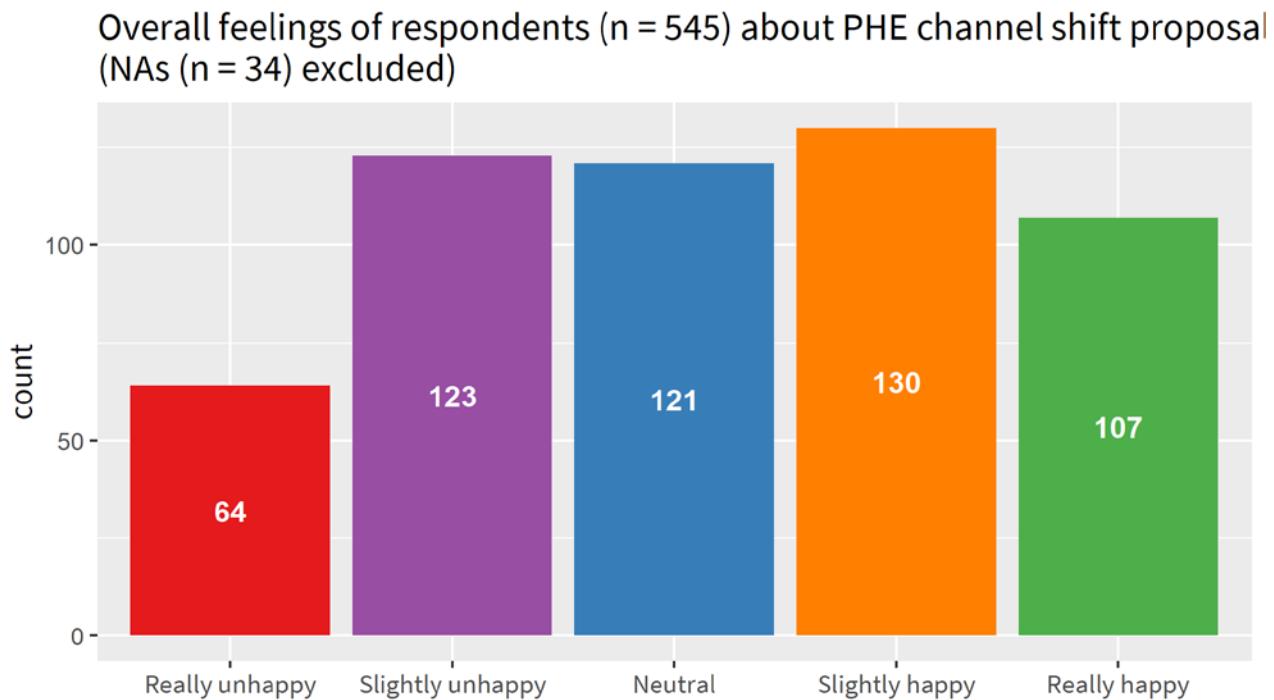
⁹⁸ <https://www.phe-events.org.uk/hpa/frontend/reg/thome.csp>

SURVEY ANALYSIS PART 1: OVERVIEW

“OVERALL HOW DO YOU FEEL ABOUT CHANGING FROM PRINTED LEAFLETS TO ONLINE INFORMATION?”

Figure 36 shows the overall feelings of survey respondents about the proposed changes. 34 of the 575 respondents did not give a response to this question; these have been excluded from the analysis.

Figure 36: Survey respondents' overall feelings about the Channel Shift proposal



The chart shows a good spread of feelings, with the more moderate central responses being predominant but also significant numbers of people answering “Really unhappy” or “Really happy.”

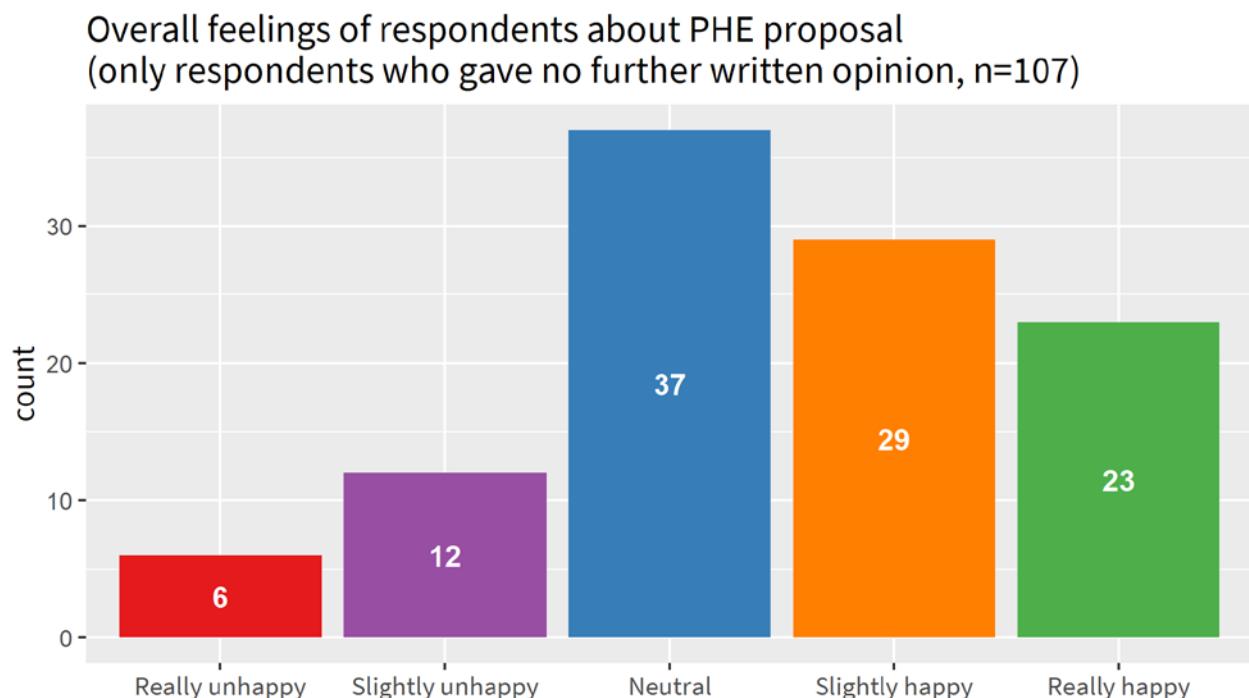
“I think overall this is to be welcomed but it's important that information remains available in a range of formats - including printed - so that everyone

can be informed about screening in a format that suits them.”

tags: choice

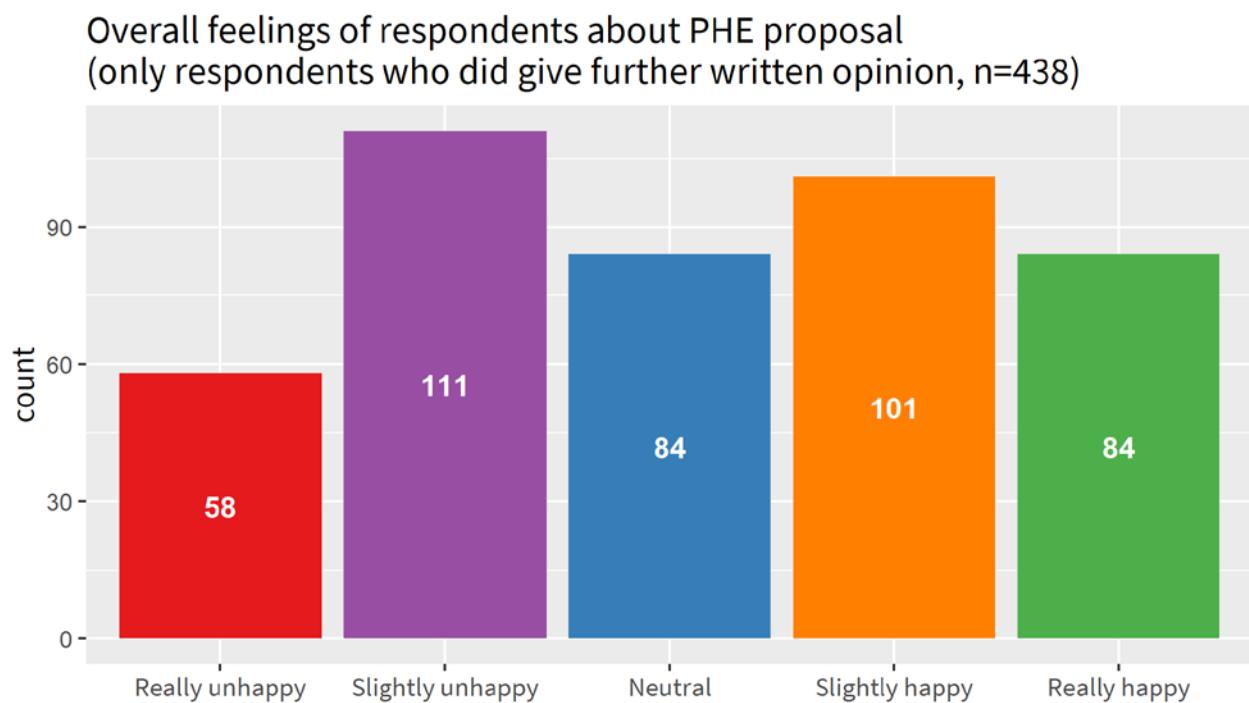
- Member of the public, male, 35-44; overall feeling: “Slightly happy”

Figure 37: Overall feelings of respondents about PHE proposals: no further written response



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Figure 38: Overall feelings of respondents about PHE proposals: further written response provided



Figures 37 and 38 are included in order to show that “neutral” and “happy” respondents were more *likely* not to provide further written opinions, whereas “really unhappy” respondents were very *unlikely* (n=6) not to give additional written explanation of their feelings.

169 of 187 (90%) of ‘unhappy’ respondents added further comments, compared to 185 of 237 (78%) of ‘happy’ respondents.

DEMOGRAPHIC SUMMARY OF RESPONDENTS

Table 35: Survey respondents by race/ethnicity

Respondents (n=579) by race	n
White (British / Irish / Traveller / Other)	476
Black (African / Caribbean / Other)	10
Mixed (any mixed background)	11
Asian (Indian / Bangladeshi / Pakistani / Chinese / Other)	17
Other	1
NA	64

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Table 36: Survey respondents by religion or belief

Respondents (n=579) by religion or belief	n
Christian	222
No particular religion / belief	220
Atheist	31
Pagan	3
Other	6
Jewish	2
Muslim	6
Agnostic	4
Hindu	6
Buddhist	1
NA	78

Table 37: Survey respondents by other protected characteristics

Other protected characteristics	n
I'm married / in a civil partnership	303
English is not my first language	18
I'm a carer for someone else	27
I'm serving / have served in the armed forces	4
I am pregnant or a new mother	15
NA	257

(NB the above “other protected characteristics” figures add up to more than 579 because 42 respondents had 2 or more characteristics, and all have been counted in the table).

OVERALL FEELINGS OF MEMBERS OF THE GENERAL PUBLIC VS. THOSE OF HEALTH PROFESSIONALS

Of the 579 respondents, the majority (**479, or 83%**) were health professionals, with just **100 (17%)** being members of the general public.

The health professionals group includes programme colleagues and managers, screening practitioners, and PHE colleagues and managers, but the analysis below does not split results up according to these categories: health professionals are treated as a single group.

Members of the public include some who have been invited to screening and some who have not, but again this distinction is not used in the analysis below.

The shapes of these charts (Figures 39 and 40) is very similar, which suggests that there is little difference in the distribution of overall feelings held by these two groups. We will look later at some of the detail of the comments made by members of each group.

“I think this is an opportunity to make savings, but may create a barrier for those less IT literate - although it may also present a more effective translation service”

tags: cost, exclusion, language

- Health screening practitioner, female, age 55-64, **with a mental health condition, physical impairment and a longstanding illness**; overall feeling: “Slightly happy”
-

“I am bombarded with online information links all the time and it's difficult to know if they are from a trusted source.”

tags: reliability, trust

- Member of the public, female, 45-54, **mixed race**; overall feeling: “Really unhappy”
-

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Figure 39: Overall feelings of health professionals (24 gave no response to this question)

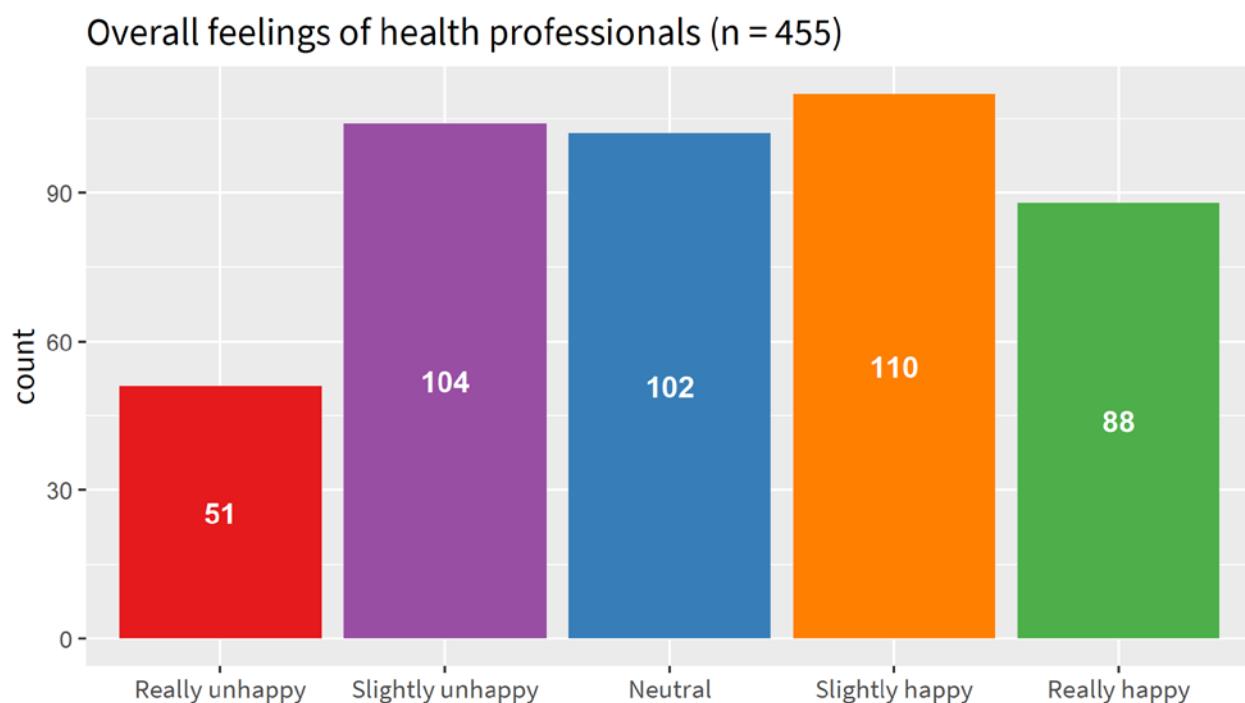
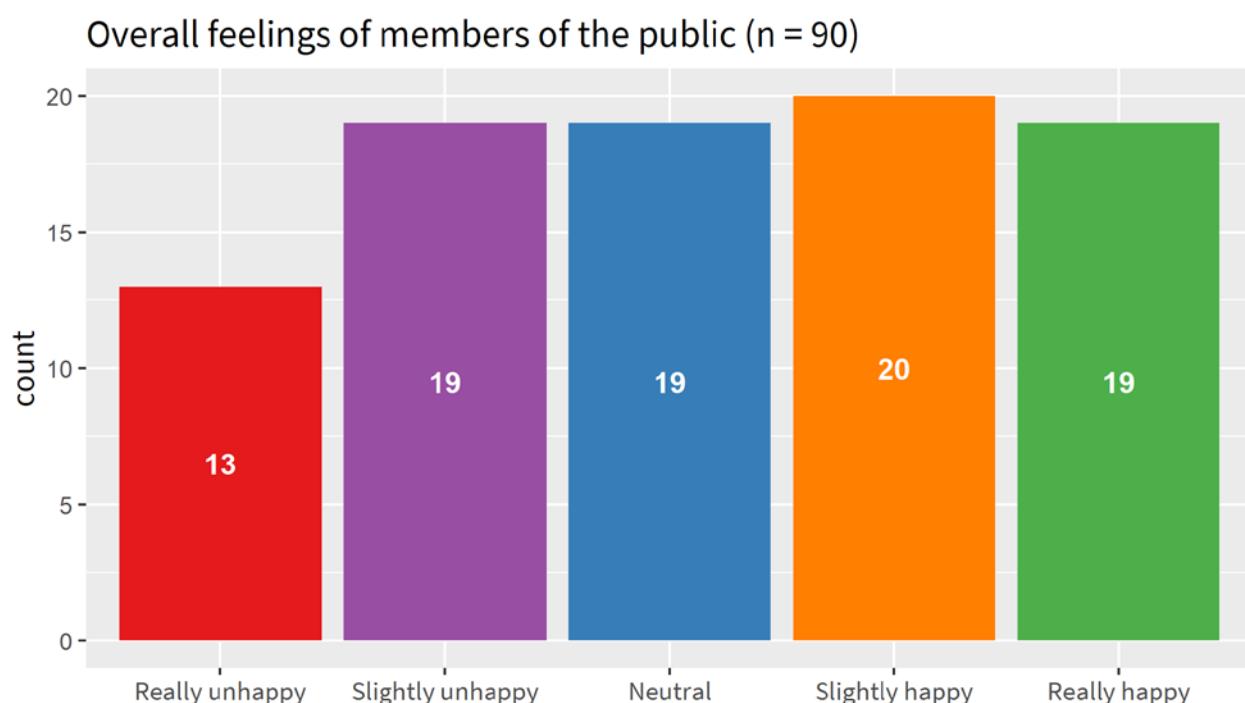


Figure 40: Overall feelings of members of the public (10 gave no response to this question)



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OLDER RESPONDENTS (AGED 65+) - OVERALL FEELING

The age band breakdown of the 579 respondents was as follows:

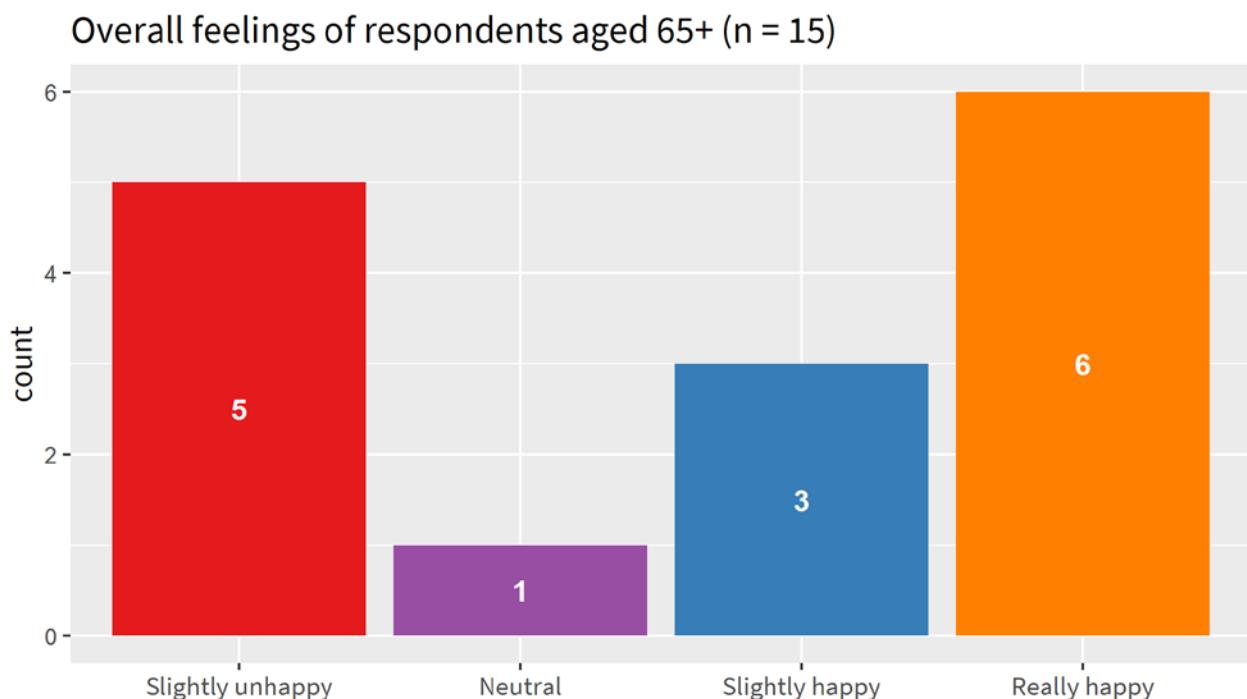
Table 38: Respondents, by age band

Age band	18-24	25-34	35-44	45-54	55-64	65-74	No age given
n	13	75	123	181	117	15	55

The age band with the highest number of respondents - by far - was 45-54. Just 15 respondents gave their age as 65+, of whom 7 were members of the public.

Nobody aged 65+ said they were 'really unhappy' with the proposal; in fact, more people who told us they were in this age group were happy than unhappy.

Figure 41: Overall feelings of respondents aged 65+



“I might lose a leaflet, but I can find online information again when I need it”

tags: findability

- Member of the public, male, **65-74**, longstanding illness; overall feeling: “Really happy”

DISABLED RESPONDENTS

59 respondents (10%) said they are disabled in some way, of whom 9 reported being disabled in 2 or more categories of disability given in the survey. 449 respondents (77.5%) did not see themselves as disabled, with 71 (12.3%) not giving any answer.

Table 39: Respondents by disability status

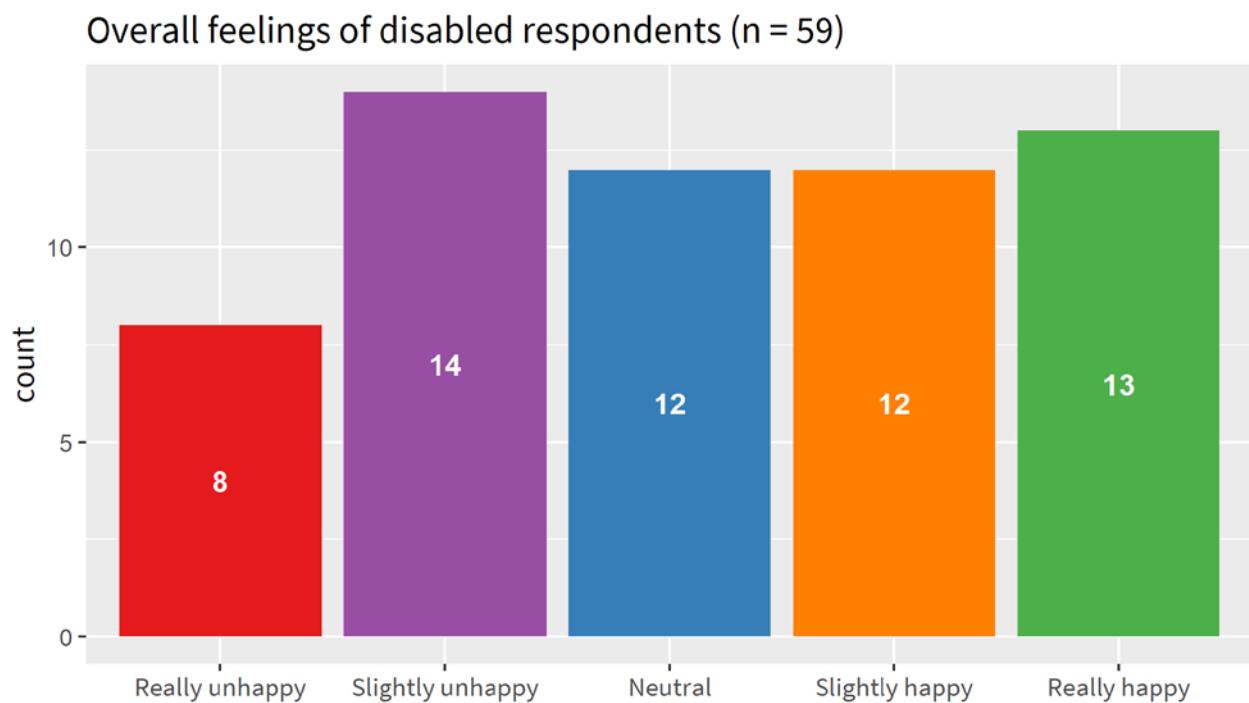
Disability status	n
No disability	449
Mental health condition	13
Physical impairment	14
Long standing illness	18
Other developmental condition	1
Sensory impairment	6
Autistic spectrum	2
Learning disability / difficulty	5
<i>Did not answer</i>	71

“Because I have learning differences including autism, I find it very helpful to have printed information as well as digital, and to have things explained face to face.”

tags: disability, channel preference, accessibility

- Member of the public, female, age 45-54, with **physical impairment, longstanding illness, autistic spectrum, learning disability/difficulty**; overall feeling: “Slightly unhappy”

Figure 42: Overall feelings of disabled respondents about the Channel Shift proposal



There is little to deduce from the figures above, except to note that disabled respondents are far from being unhappy overall with the proposals: there is a fairly even spread of feeling.

LGBT+ RESPONDENTS; SEXUALITY AND GENDER

We then examined the respondent group according to their gender, gender identity and sexuality. There was quite a high proportion of respondents who opted to skip some or all of these questions. Still we can draw some conclusions.

There were far more female respondents (466) than male (54).

1 respondent said that their gender identity is not the same as assigned at birth. **17** of those who responded to the question about sexual orientation gave an answer that was other than heterosexual/straight.

These 18 people have been combined into a single sub-group for the purposes of the further analysis. There is no clear pattern in their overall feelings about the proposals compared to the full sample.

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Table 40: Respondents by gender

Gender	n
Female	466
Male	54
No answer given	59

Table 41: Gender identity

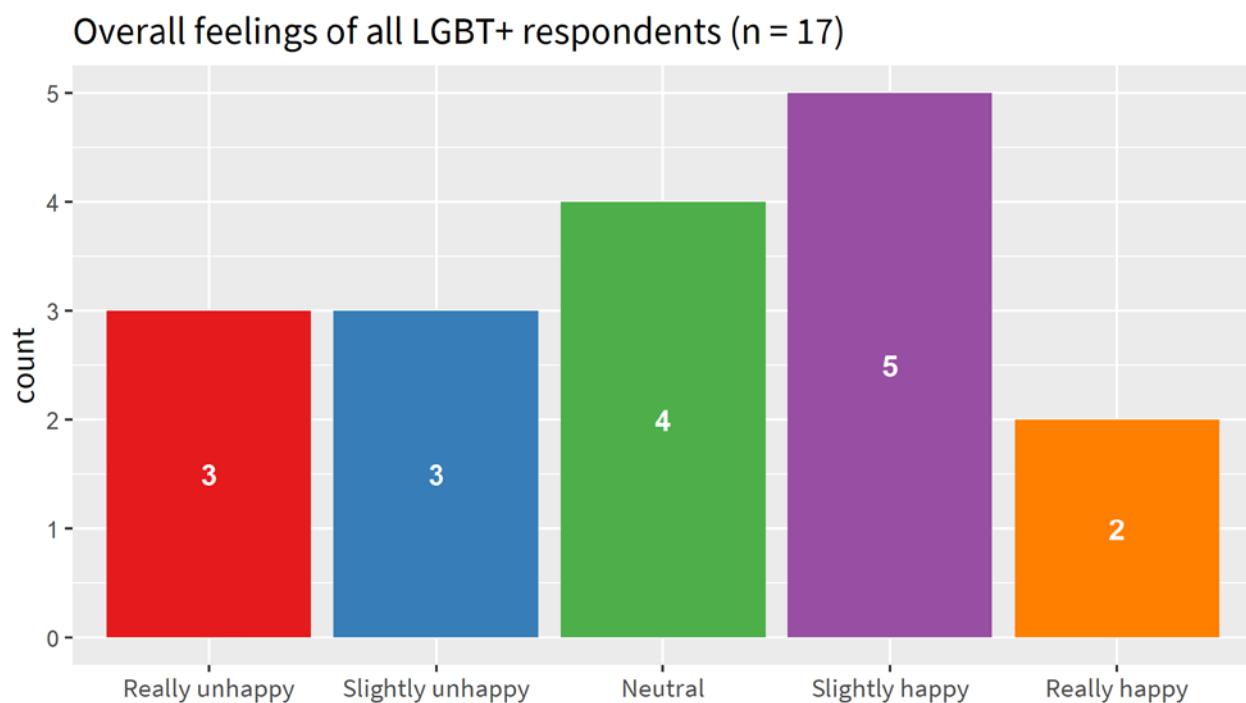
Gender identity as assigned at birth	n
Yes	515
No	1
No answer given	63

Table 42: Sexual orientation

Sexual orientation	n
Heterosexual / Straight	477
Gay	4
Bi/polysexual	8
Lesbian	5
No answer given	85

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Figure 43: Sentiments of LGBTQ+ survey respondents (1 of the 18 did not answer this question)



Again, there is an even spread across the range here, with no strong pattern, and given the small sample size we cannot draw any conclusions here.

SURVEY ANALYSIS PART 2: THEMATIC SENTIMENT ANALYSIS

WHAT ARE YOUR OPINIONS ON CHANGING FROM PRINTED LEAFLETS TO ONLINE INFORMATION?

We then analysed the textual responses provided in response to the survey question, “What are your opinions on changing from printed leaflets to online information?”

In total there were **565** responses, provided by **438** respondents. However, these responses ranged from the very short to rather longer paragraphs. Within paragraphs there might be different points relating to different aspects of the proposals or providing further detail.

We split the responses down into separate sentences⁹⁹ for more fine-grained analysis, which created a total of **930** sentence-level *t*okens. We exported the sentences to a spreadsheet and then coded each token in Excel. Although respondents had already provided their overall feeling about the proposals (see previous section), for a more detailed and sensitive assessment of what they thought, we examined and coded their responses at sentence level through a separate coding process.

This is important because, for example, a respondent who is really unhappy about the idea might still have one positive thing to say about it; conversely someone who says they are really happy with it might, as an aside, also mention a concern that they have. The sentence-level thematic analysis allows us to pick up such nuances.

CODING PROCESS

FILTERING

Firstly, any empty tokens, meaningless fragments, and duplicate and near-duplicate comments from the same person were coded with the code ign for ignore and were removed

⁹⁹ Based on an approach documented by Silge & Robinson, *Text Mining with R* (<https://www.tidytextmining.com/>). They recommend a semi-automated sentiment analysis of a text corpus at single word level, but here we were happy to do the coding manually at sentence level.

from this part of the analysis. Some other comments that were out of scope (e.g. relating more to general issues around healthcare or personal experiences not related to screening) were also removed.

Any comments that were mainly about the survey process itself, rather than the Channel Shift proposal, were tagged as meta. These comments are reproduced below (Table 42) as they may be a useful resource, but were not further included in the thematic coding analysis.

TAGGING

Remaining sentences were tagged for their overall sentiment, this being one of pro (generally positive about the proposal), con (generally against, concerned or negative), and neu (neutral or balanced overall),¹⁰⁰ and then allocated where appropriate up to four further tags to pick out the main theme(s) of the sentence. The tags were not pre-specified, but emerged through the coding process. Occasionally a sentence would not be given any further tag apart from the overall sentiment tag, but the majority had one or more thematic tags assigned.

SOME NOTES ON THE CODING TAGS USED

A total of **66** tags were used, and these are explained briefly below.

- exclusion - this was used for general digital exclusion comments; nearly always in conjunction with another tag such as age or poverty
- concern - this was used when a comment expressed a sense of concern for a group of people
- readability, accessibility, affordability, connectivity, skills, confidence - these are fairly self-explanatory, and were used when these aspects of digital exclusion were mentioned or implied.
- poverty - as above, but includes references to “deprivation” etc. Not quite the same thing as affordability
- sustainability - used as a catch-all for references to the environment or being “green”

¹⁰⁰ Note: We maintain the use of the names of the tags (con, neu, pro) throughout, rather than expanding these to full words such as “against” or “positive”, because of the potentially loaded meanings and presumptions of such words. For example, it would seem unhelpful to label a response raising concerns about the impact of proposals on a particular group as “negative”; similarly, ‘neu’ might be used to tag a comment that contains strong ideas both in favour and against the ideas, but which is balanced overall. “Neutral” would not seem to be a fair ‘translation’ of the tag in such cases. We hope that by retaining the tags themselves in the discussion here, we maintain a degree of agnosticism about attaching value judgements to the tags.

- paper - only used when paper was literally used as a reason for being pro or con. Similarly, waste
- clarity, quality - these are only used in reference to these aspects of paper leaflets. See also...
- printing - where a respondent refers to a local body printing out leaflets themselves as a workaround or supplement to online-only information
- channel preference - generally used about the respondent themselves or a group they know well, with reference to stated preference for communication via a particular channel or medium. A lot of responses contained these statements, many about a personal preference, which might not be ultimately that useful for this exercise
- fine - tags comments that are basically “I’m online and it works for me”
- both - used to tag responses that basically say, “both paper and online should/must be provided.” Sometimes in the sense of having one channel as a backup for the other, not necessarily having same priority for both
- accessibility - usually refers to strict technical accessibility issues but can be just to do with a general sense of how easy a user may find it to access information. See also...
- findability - used to tag comments about how easy it is to *retrieve* or *search for* information
- email - plenty of comments referred to issues and concerns around email, particularly about retrieval and about information being lost in “too much email”
- convenience - a very common tag, this refers to what people will find it easy to obtain, access, retrieve or annotate. See also usefulness
- uptake - specifically refers to the uptake of screening itself (e.g. the impact of information on this). By contrast...
- engagement - refers to how likely it is that users will *choose* to access information in a particular format e.g. via an app. also “effectiveness” - how easy it is for the information to get to the users?
- reach - refers to the effectiveness (or not) of a channel at reaching particular groups that are “harder to reach”
- information - tag used to pick out comments that refer to how well the information will be communicated or how clear it will be in different formats. See also...
- promotion - where health promotion impacts of Channel Shift are referred to. Sometimes friends or family are used alongside, where leaflets (for example) are referred to as being easy to share. Also, shareability
- consent - where information on screening is linked to the issue of (informed) consent
- demography - used where a respondent refers in non-specific terms to ‘certain groups’
- age - very common tag, used for comments that claim age as a significant factor, usually older people having less opportunity to access information but sometimes in reference to younger people preferring online information. Used only where age is specifically referred to as a factor
- disability - tags comments where the needs of, or impact on, disabled people are specifically referenced

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- readiness - used where comments say it's too soon for the proposed changes, or “not yet”, or “more work is needed first” - in terms of the spread and adoption of technologies and internet access across the country (in general, or sometimes with reference to a specific group e.g. a patient group)
- language - self-explanatory; often refers to access issues for people with ESOL
- inequality, discrimination - where comments refer to particular groups being unfairly treated or discriminated against by the proposal
- supplementing - where professionals will be required to provide extra support for users in lieu of, or to assist with access to, online information. For example, assisted digital, or training.
- cost - a very common tag. Self-explanatory, and generally used where cost or money is specifically referred to
- resources - used only where “resources” are actually referred to and it is *not* obvious that these are the same as, or a euphemism for, “money”
- women - used to tag comments where a user group is specifically referred to as being women
- choice - a bit like both but where flexibility or user choice is emphasised
- currency - where comments refer to how up to date (or not) information can be
- reliability, trust - comments about (perceptions of) how reliable online information is.
Also: security, confidentiality

‘META’ COMMENTS ABOUT THE SURVEY PROCESS

Several respondents pointed out some potential issues with the survey being online, in terms of its reach and accessibility. Although these comments were not included in the further sentiment analysis, they are recorded here.

While people who are not skilled online were by definition unlikely to access the survey, and may have found themselves excluded, the survey nonetheless appears to have captured a range of views including many people expressing concern about access to information for others who are not online.

Table 43: Survey comments about the survey process (tagged 'meta') (n=16)

id	token	tag1
6	I assume you have undertaken this survey offline as well as online?	meta
6	Otherwise I imagine you will get a skewed response from those who are skilled already online.	meta

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6	Can I ask that you share the survey through the local health watch and through the patient organisations for these screening programmes, if you have not already?	meta
7	This survey will obviously not capture the views of those unable/unwilling to use digital.	meta
23	Many of the people who would be most affected by this change are unlikely to see this digital survey or to be able to complete it.	meta
23	I have needed support to do this.	meta
23	I hope that these people are consulted and supported to do so where needed.	meta
113	What about the people who can't access an online survey to tell you that online doesn't work for them?!	meta
114	Slightly skewed that the survey about whether or not to move information online, is only appearing online.	meta
136	As this survey was not written in Easy Read, a format which many people with a learning disability require, how do you expect to hear from this group?	meta
143	I feel the collated results from this survey may give a biased view of the ease of switching to online information as only those confident with IT and the internet will complete the survey and it will miss the views of those most vulnerable.	meta
313	Is this survey being produced on paper as well?	meta
365	I am concerned about your methods of an online survey.	meta
365	Surely you are only targeting the people who already use the internet and therefore receiving a very biased response.	meta
400	This is an online survey, therefore, it can be assumed people completing this survey have access and are comfortable with using the internet.	meta
471	This survey is a bit odd as it asks if you are a screening professional then treats you as a screening recipient.	meta

SENTENCE-LEVEL SENTIMENT ANALYSIS - OVERVIEW

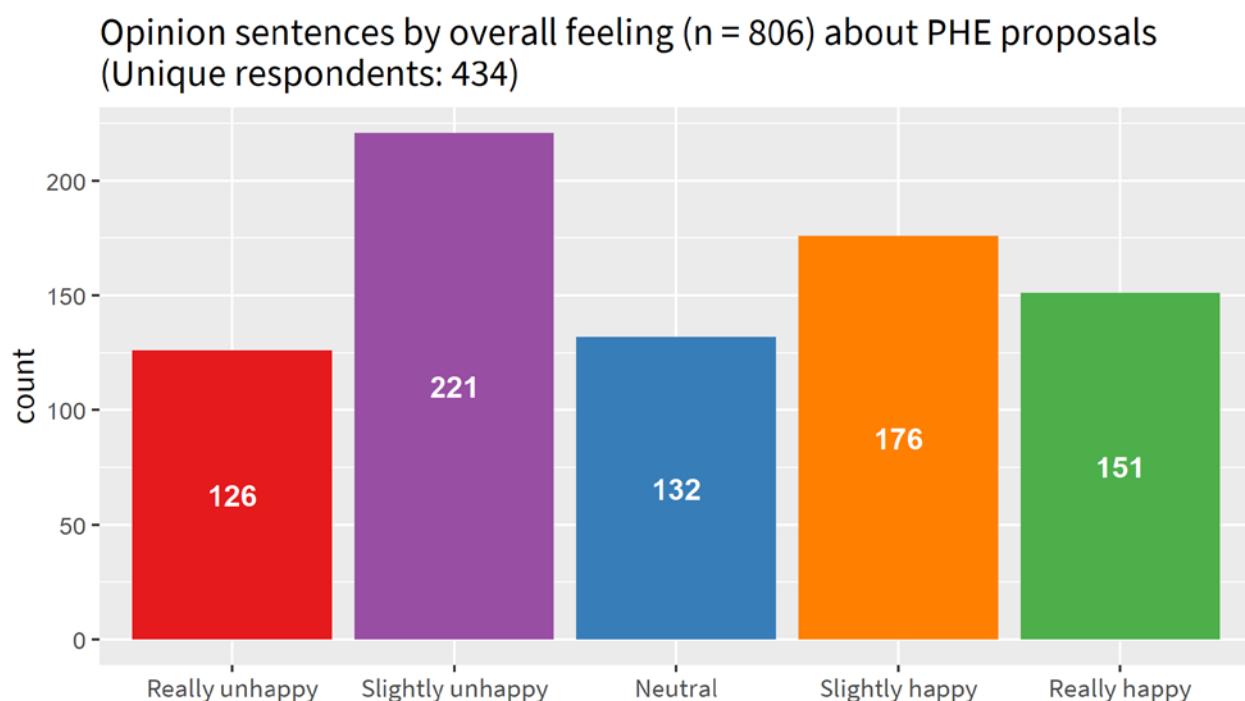
After we removed fragmentary, out of scope, duplicate and meta comments, there were **806** sentence-level comments remaining, from **434 (75%)** of the original 579 respondents. This is a very respectable percentage of respondents to have received written comments from.

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In this section we check the correlation between the coding of each sentence token and the overall feeling reported by the relevant respondent.

While **221** sentences come from people who feel “slightly unhappy” with the proposal - more than any other category - overall there is a good balance in this corpus between “unhappy,” “neutral,” and “happy” respondents.

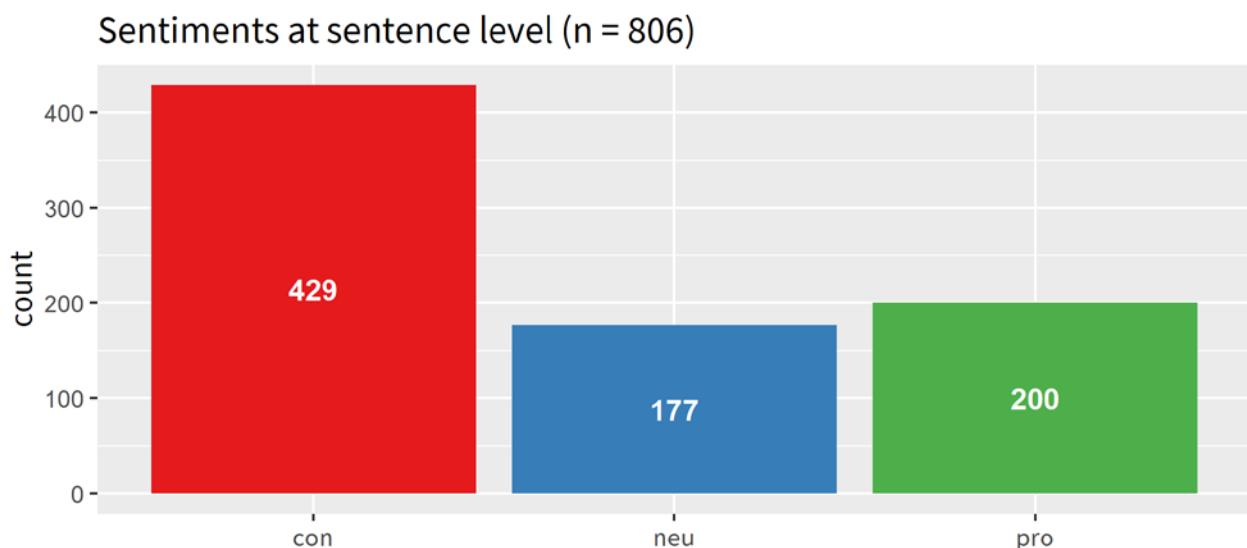
Figure 44: Sentence-level analysis: summary of overall reported sentiment



As a baseline, if every sentence from a respondent who felt ‘unhappy’ overall was expressing a concern or criticism of the proposals (i.e. should be tagged con) then we would expect to have 347 (126+221) con sentences (43%); and if every sentence written by ‘happy’ respondents was in favour of the proposals (taggable as pro) then we should have 327 (176+151) pro sentences (41%), and 132 neu sentences (16%).

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Figure 45: Sentence-level analysis: summary of tagged sentiment



However, when the sentences themselves were tagged for sentiment, the majority (**429, or 53%**) were labelled con as against **377** others (see Figure 45). This is not surprising, for the reasons outlined above. For example, those with concerns about the proposals may write more sentences explaining their position than those who are less concerned or enthusiastic. This applies also to those who described themselves neutral overall, and even those who were happy overall may have had concerns to express.

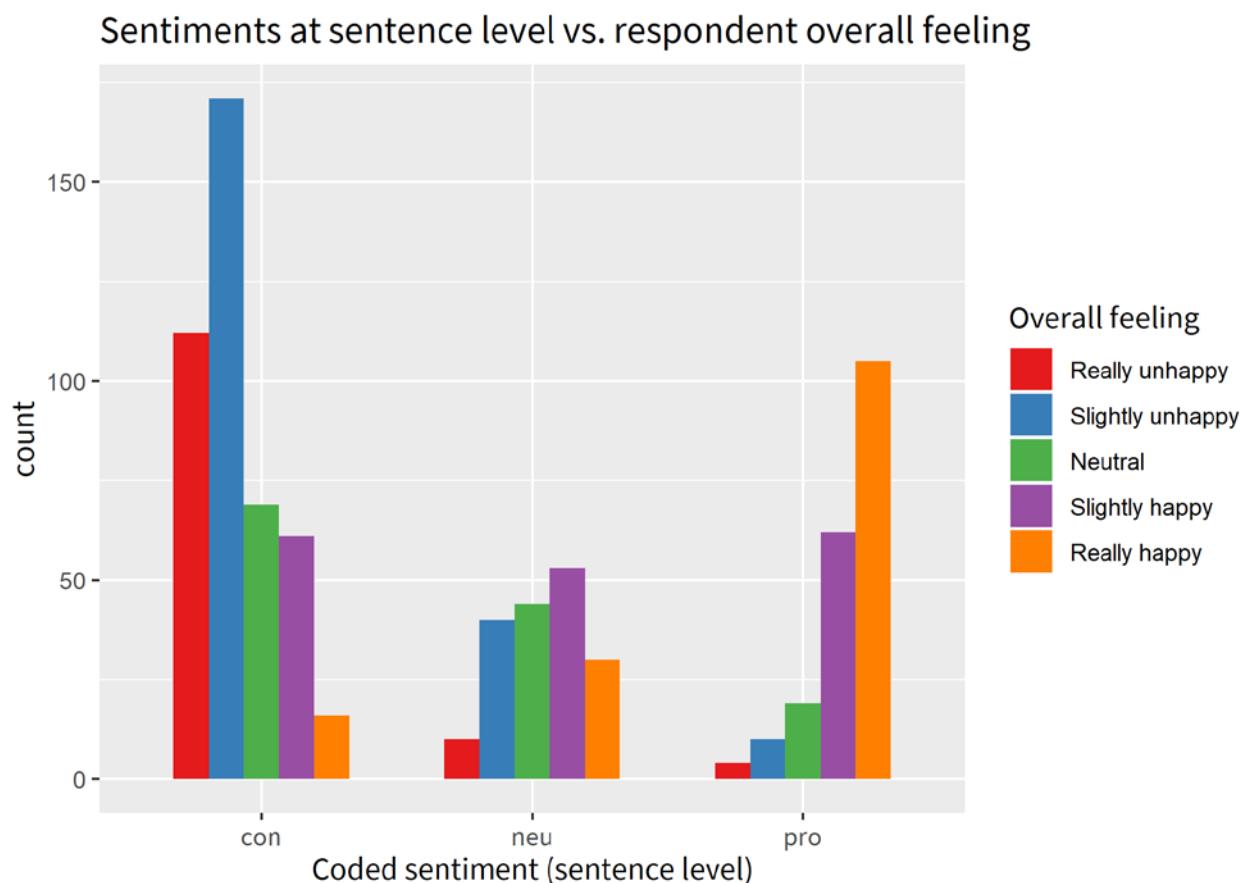
- 41% of sentences were written by people who were *slightly* or *really happy* overall, yet only 25% of sentences themselves were tagged as pro in the coding process
- 43% of sentences were submitted by people who were *slightly* or *really unhappy* overall, yet 53% of sentences themselves were tagged as con
- 16% of sentences were written by people whose feelings were *neutral* overall; 22% of sentences were tagged as neu in the manual coding process

CORRELATION BETWEEN REPORTED SENTIMENT AND TAGGED SENTIMENT

The correlation between reported sentiment and tagged sentiment is examined in the chart below. Most of the sentences tagged pro came as expected from respondents who had reported themselves happy with the shift proposals, while those tagged neu show a spread across all reported sentiment categories. Sentences tagged con are again predominantly from

those who reported themselves as unhappy overall with the idea, but there are also around 150 sentences here from those who are neutral or happy overall.

Figure 46: This chart shows the proportions of opinion sentences, tagged according to three sentiment categories (con, neu, pro), against the overall feeling category of the respondent



We can conclude that there seems to be generally a good correlation between the feelings respondents reported themselves, and the tagging of their comments.

Those who felt *slightly unhappy* overall were very likely to submit sentences that were tagged con, and very unlikely to express opinions coded as pro. By contrast, those who described themselves as *slightly happy* overall wrote as many con sentences as pro.

- Respondents who were generally positive about the Channel Shift proposals were still relatively likely to submit opinions that expressed concern or caution about the proposals in some way;

- Whereas respondents who felt unhappy overall were relatively unlikely to include comments with a more positive angle

“Whilst it is a good way forward environmentally, it may discourage less confident people or people with no access to a pc, phone or internet taking part in screening programmes.”

tags: sustainability, accessibility, uptake

- NHS colleague/manager, female, 45-54; overall feeling: “Slightly unhappy”

CODING RESULTS: TAG POPULARITY

Table 44: The 20 most used coding tags in the sentiment analysis

tag	number of sentences
exclusion	195
concern	157
age	112
accessibility	97
convenience	74
channel preference	69
sustainability	53
both	51
choice	49
information	47
cost	45
connectivity	41
language	36
paper	32
skills	30
findability	30
readability	26
women	22
demography	22
readiness	21

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In terms of digital exclusion, then, the issues most likely to be raised by survey respondents were: age, accessibility, connectivity, language, skills, readability, women and demography.¹⁰¹

Accessibility can to some extent be regarded as a proxy for a concern for disabled people, though this is not necessarily what respondents had in mind. Accessibility issues can be related to ageing-related changes as well. In terms of the Equality Act protected characteristics, age, disability, language and gender are the characteristics most likely to be referred to in the survey. But other issues not directly related to protected characteristics are also prominent here: in particular those relating to connectivity (related to income/poverty) and educational attainment level (the readability tag relates to this).

Sustainability concerns and convenience also feature in the top 20 tags.

Table 45: Most used coding tags, by sentiment (con, neu, pro) subset

con		neu		pro	
tag	usage	tag	usage	tag	usage
exclusion	168	choice	35	sustainability	44
concern	128	both	35	cost	35
age	85	concern	26	accessibility	28
accessibility	47	exclusion	25	paper	28
channel preference	46	accessibility	22	convenience	25
convenience	41	age	19	channel preference	11
information	36	language	13	fine	11
connectivity	29	channel preference	12	language	11
skills	26	connectivity	10	currency	10
readability	19	convenience	8	waste	10

¹⁰¹ See notes on coding tags above for explanation

The data here suggests that the main opinions broadly against the proposals referred to the risk of **exclusion** for particular groups, with **older people** and those lacking **skills** and **connectivity** (those digitally excluded) being the most predominantly mentioned. Few if any people suggested that the switch to digital information would be beneficial in addressing exclusion.

Accessibility and **findability** were also frequently mentioned, with many respondents being concerned that digital information would be hard to access, find or re-find. The **convenience** of a **paper** leaflet was also frequently mentioned, though many people mentioned digital formats as being more convenient and accessible than the current formats.

“Out patients often make notes on their leaflets for when they see a health professional as reminders.”

tags: convenience, usefulness

- NHS colleague/manager, female, 45-54; overall feeling: “Really unhappy”
-

For those more in favour of the proposal, **sustainability** issues and **cost-saving** were most frequently referred to. Many people said that online information would be their preference and that is in some ways more convenient. The possibility of automatic translation via online **language** tools was also mentioned (many other respondents mentioned language factors as a concern).

For those with more neutral/balanced views in their written responses, the concept of **choice** and multiple options being available was a dominant theme. Many similar issues around **accessibility** and **connectivity** concerns were also raised.

“Online is the way to go - with option to print for certain patient groups”

tags: choice

- PHE colleague/manager, female, 45-54; overall feeling: “Slightly happy”
-

The next section looks at the associations between tags: which tags tend to be found together. This helps us to see how different themes in the dataset are connected.

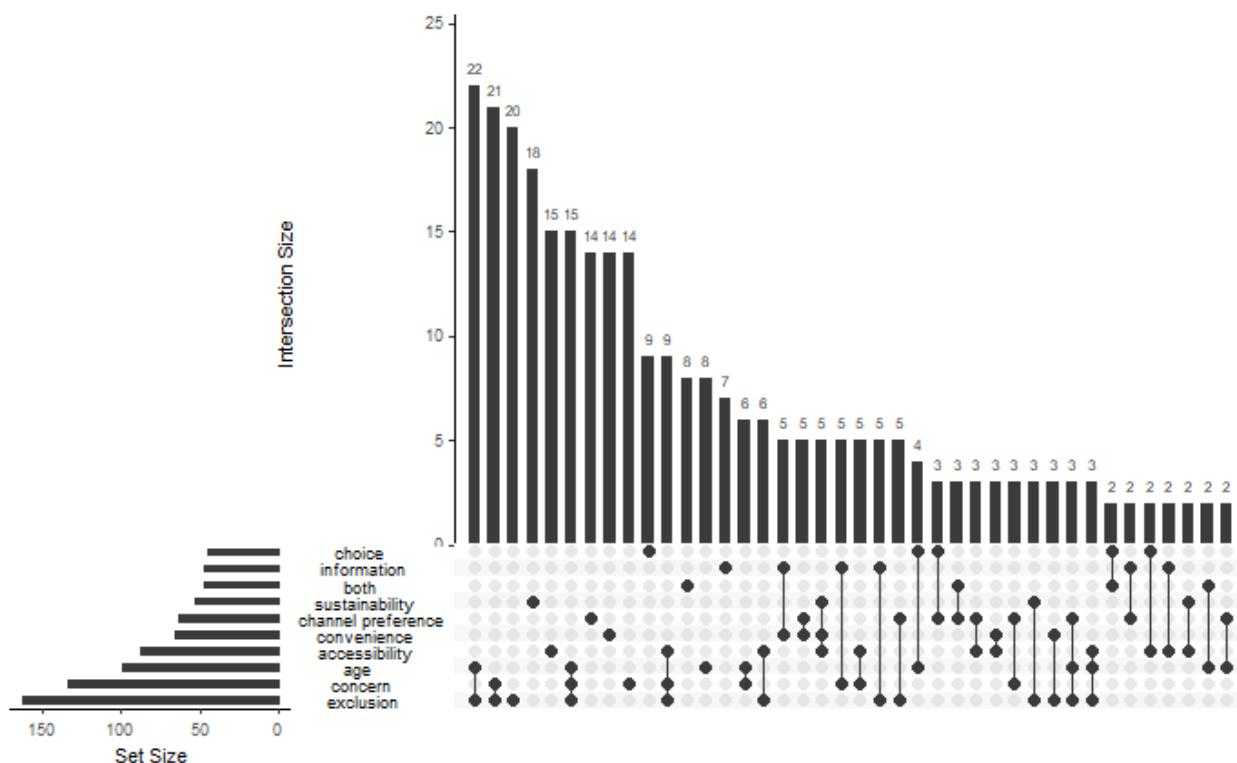
3.10 SET ANALYSIS

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These charts tell us which tags are associated with each other, i.e. assigned to the same sentence tokens. They are presented overall and then by subset according to the three sentiment tags (for clarity, only the most prevalent tags are included here).

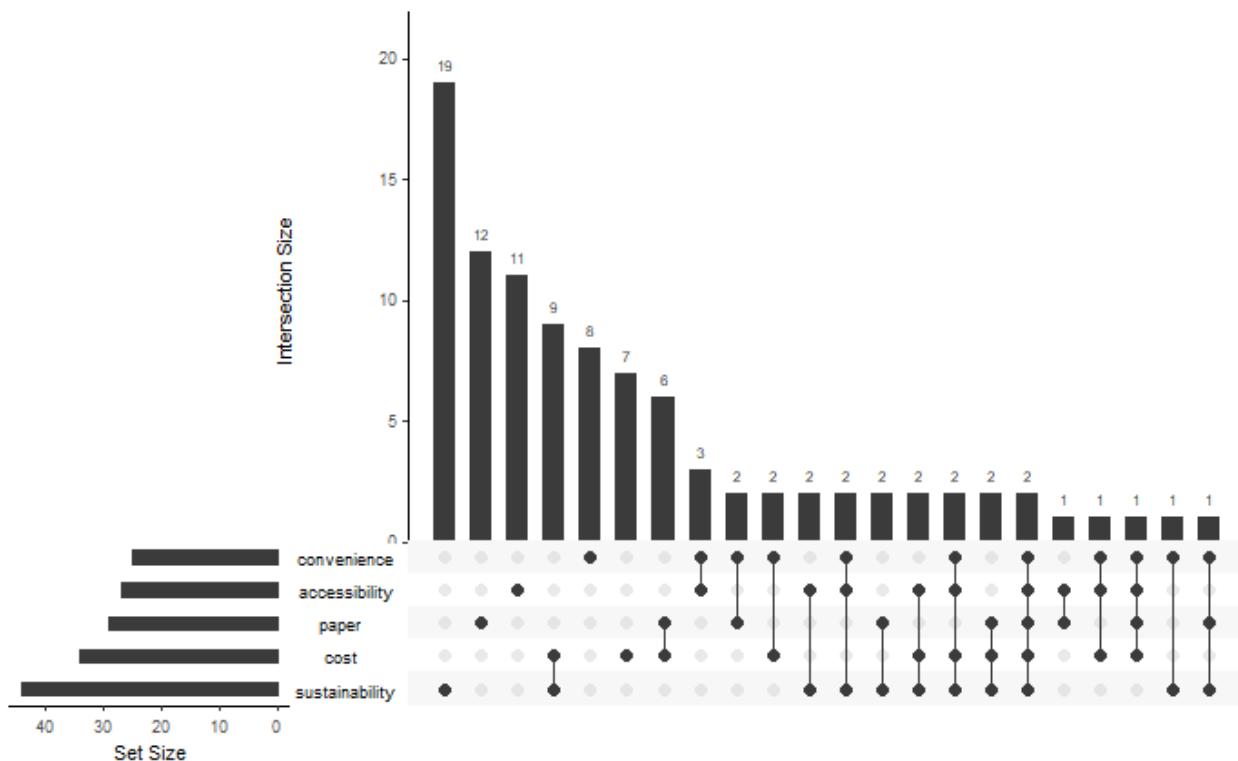
SET ANALYSIS OF TAGS ACROSS FULL DATASET

Figure 47: Set analysis of full dataset (not all possible intersections are shown for reasons of space)



SET ANALYSIS OF TAGS WITHIN 'PRO' SUBSET

Figure 48: Set analysis of the top 5 tags within the 'pro' subset

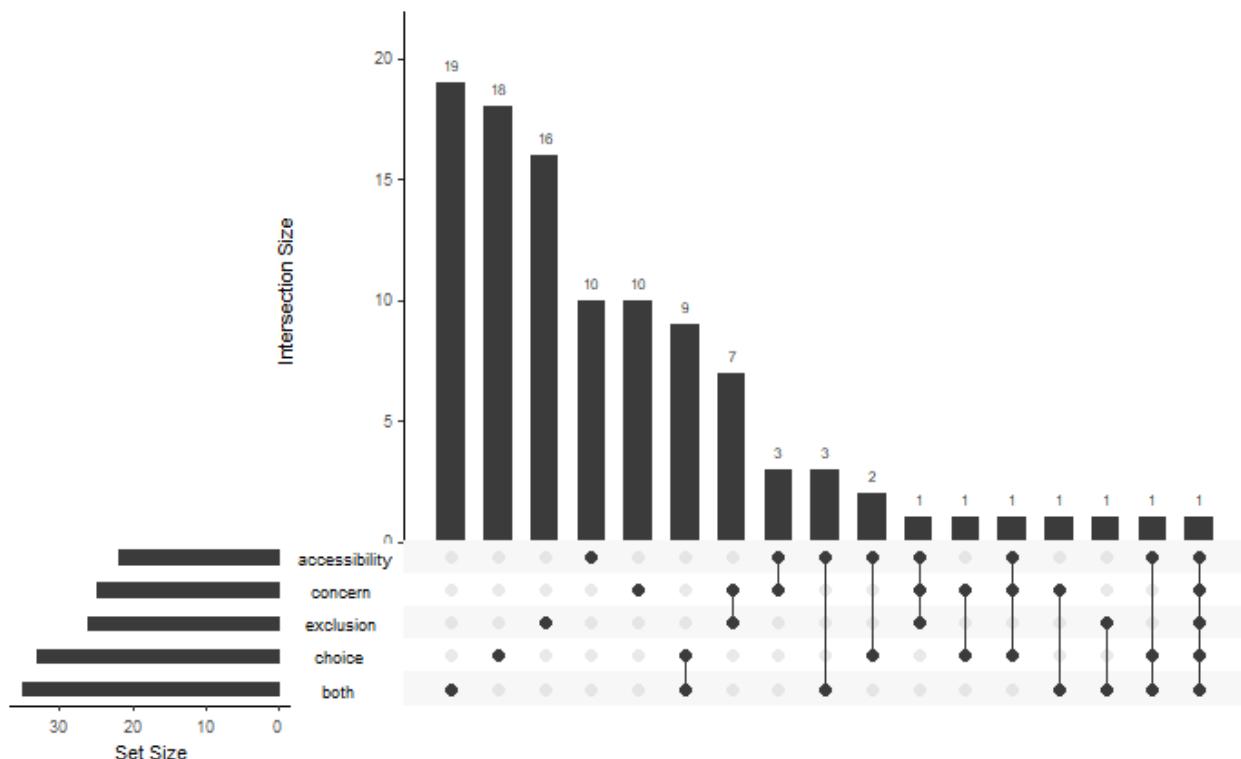


In this example, the tag sustainability, the most common tag within the pro subset (assigned to 44 of 200 sentences), occurs as the sole tag (of these five) for 19 sentences within this subset. It occurs with the second-most common tag, cost, 17 times in total. Paper and cost were relatively likely to be mentioned together (11 times); similarly, convenience and accessibility were also likely to be mentioned together (11 times).

This chart shows that the predominant themes cited by people commenting in favour of the shift to digital were sustainability and cost, with accessibility and convenience benefits also being noted often.

SET ANALYSIS OF TAGS WITHIN 'NEU' SUBSET

Figure 49: Set analysis of the top 5 tags within the 'neu' subset



The comments in this subset largely relate to the idea of choice or multiplicity of format for service users, as well as concerns about exclusion. Accessibility as an issue is related to the promotion of choice as well as to exclusion. There are relatively few associated tags in this subset: the 5 most common intersections are the tags on their own.

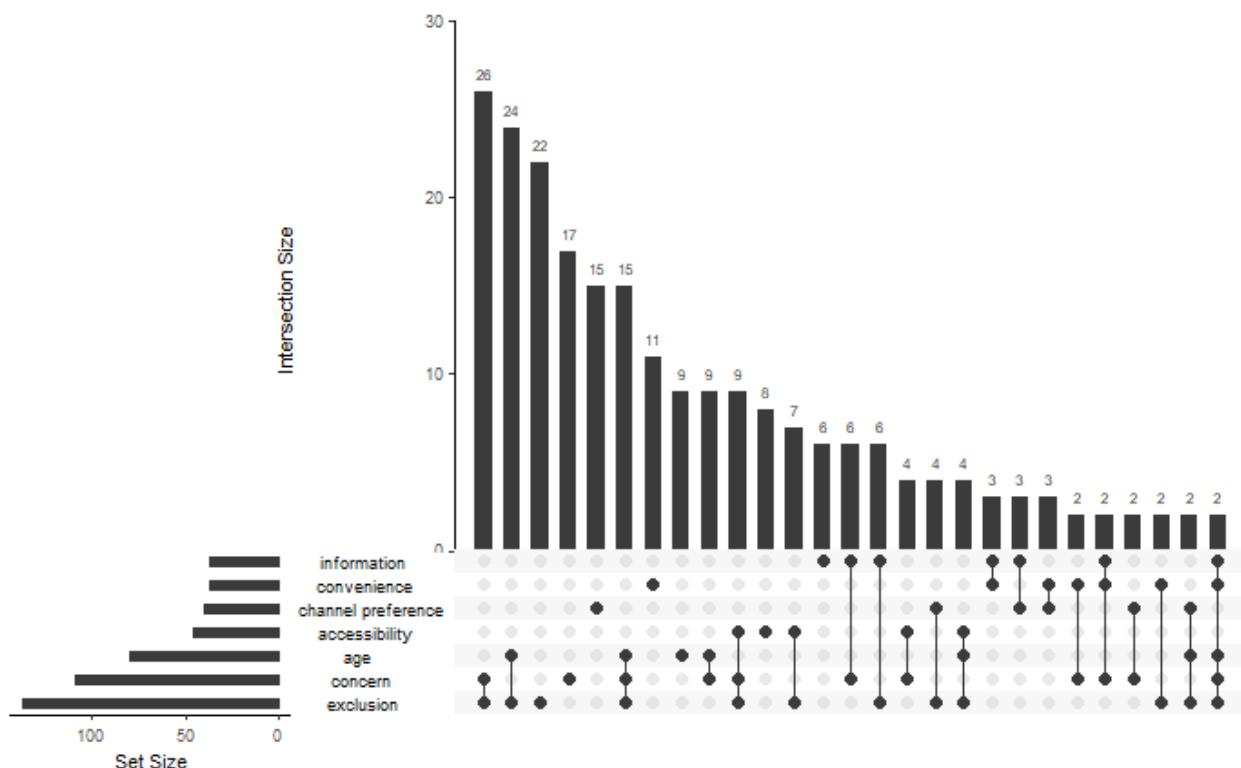
"The negative points are it makes it difficult to highlight information to patients and service users or write explanatory notes on them"

tags: information, annotation

- PHE colleague/manager, female, 35-44; overall feeling: "Slightly unhappy"
-

SET ANALYSIS OF TAGS WITHIN 'CON' SUBSET

Figure 50: Set analysis of the top 7 tags within the 'con' subset



Exclusion is the most-commonly used tag on sentences tagged con, and it is strongly associated with the other top tags in this subset. Of 128 sentences tagged concern, 62 (nearly half) are also tagged exclusion (71 of 153 sentences if you include those from the neu subset as well).

This chart shows the themes that were most prominent in the subset that was largely concerned or critical of the proposals: as already noted, age and exclusion are predominant but concerns around information getting to people and concerns over losing the convenience of paper leaflets were also regularly cited.

MOST POPULAR TAGS BY DEMOGRAPHIC SUBSET, AND SENTENCE SAMPLES

In this section, we examine the different subsets of the respondent sample, when divided by professional/public, age (65+), disability, and gender/sexuality.

HEALTH PROFESSIONALS VS GENERAL PUBLIC

The tags used most for responses by **members of the public** are shown in Table 45 below.

Table 46: The 10 tags used most for responses by members of the public

tag	no. of sentences	% of all sentences
concern	31	13.6
exclusion	28	12.3
accessibility	14	6.1
age	14	6.1
convenience	12	5.3
channel preference	11	4.8
findability	11	4.8
fine	9	3.9
choice	8	3.5
readability	7	3.1

This reflects the themes that were most commonly mentioned by members of the public. For example, accessibility was used to tag 14 response sentences, which is 6.1% of all the sentences contributed by members of the public.

The tags used most for responses by **health professionals** are shown in Table 46 below.

Table 47: The 10 tags used most for responses by health professionals

tag	no. of sentences	% of sentences
exclusion	167	13.2
concern	125	9.9
age	97	7.7
accessibility	80	6.3
convenience	61	4.8
channel preference	55	4.3
sustainability	46	3.6
both	45	3.6
information	43	3.4
connectivity	41	3.2

Comparing these, there is little difference. The top six tags are the same - though in a slightly different order – indicating that **the most prominent issues for members of the public are not different overall to those for health professionals**. There are some differences lower down the table though, with members of the public being more likely to comment about the findability and readability of information, but health professionals being more likely to mention sustainability and the quality of the information.

OLDER PEOPLE

This group is a subset of the whole respondent sample – i.e. these may also be member of any other subset: they maybe health professionals or members of the general public, for example. As mentioned above, the sample of respondents who reported being aged 65+ is not large: only 14 people. The tags used most for responses by **respondents aged 65+** are shown in Table 47 below.

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Table 48: The tags used most for responses by respondents aged 65+

tag	no. of sentences	% of sentences
exclusion	4	11.4
cost	4	11.4
accessibility	4	11.4
concern	3	8.6
sustainability	3	8.6
channel preference	2	5.7
fine	2	5.7
skills	1	2.9
choice	1	2.9
convenience	1	2.9

DISABLED PEOPLE

59 respondents said that they are disabled. The tags used most for responses by **disabled respondents** are shown in Table 48.

"It is exclusionary and does not consider disabled people"

tags: exclusion

- Member of the public, female, 25-34, **with a mental health condition and physical impairment**; overall feeling: "Really unhappy"

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Table 49: The tags used most for responses by disabled respondents

tag	no. of sentences	% of sentences
exclusion	33	15.9
age	24	11.5
concern	18	8.7
accessibility	15	7.2
cost	8	3.8
convenience	8	3.8
sustainability	8	3.8
channel preference	7	3.4
language	7	3.4
readiness	7	3.4

LGBTQ+ PEOPLE

18 respondents are in these categories. The tags used most for responses by **LGBTQ+ respondents** were:

Table 50: The tags used most for responses by LGBTQ+ respondents

tag	no. of sentences	% of sentences
exclusion	9	16.4
concern	6	10.9
convenience	4	7.3
age	4	7.3
accessibility	3	5.5
disability	2	3.6
sustainability	2	3.6
language	2	3.6
readiness	2	3.6
inequality	2	3.6

ILLUSTRATIVE SELECTION OF COMMENTS

We manually picked a selection of 50 comments from the corpus of responses, with the intention of showing a range of examples of the comments that were submitted. The selection mirrors the proportions of the whole dataset in terms of the balance of “overall feeling” of the respondents. Some of the quotes have been inserted in places into the survey analysis text above; the remainder are presented below.

“A discussion about the side effects is more beneficial to patients.”

- Health screening practitioner, female, age 25-34, **with a mental health condition**; overall feeling: “Neutral”
-

“both options should be available, on line there should be more languages available than what is currently in either written or on line”

tagged: choice

- NHS colleague/manager, female, 45-54; overall feeling: “Neutral”
-

“I think there should be an option for those who may have any kind of special needs to be given a printed leaflet.”

tagged: choice, accessibility

- PHE colleague/manager, female, 25-34; overall feeling: “Neutral”
-

“Need to make sure there is still face to face discussion opportunity”

both, supplementing

- NHS colleague/manager, female, 55-64; overall feeling: “Slightly happy”
-

“There are some groups who may still benefit from printed information e.g. older age groups, those who don't have internet access”

exclusion, age, connectivity

- PHE colleague/manager, female, 45-54; overall feeling: “Slightly happy”
-

“I am all for trying to save paper and resources but I believe both options should continue as not everyone can manage online, being able to print online information should continue.”

paper, both

- NHS colleague/manager, female, 35-44; overall feeling: “Slightly unhappy”
-

“Completely appreciate the need to reduce spending & keep up with the times, but reducing inequalities is a significant part of PHEs work.”

cost, concern

- PHE colleague/manager, female, 35-44; overall feeling: “Slightly unhappy”
-

“I'm happier to read paper information than online and sometimes I think it is easier to highlight areas to ask questions this way”

readability, information

- NHS colleague/manager, female, 55-64; overall feeling: “Neutral”
-

“Printed leaflets are often clearer and more inviting to read.”

readability, clarity

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- PHE colleague/manager, female, 25-34; overall feeling: "Neutral"

"Helpful to have physical or at least reliable unchanging record of what has been sent and when that enables easy follow-up." reliability, tangibility

- PHE colleague/manager, male, 35-44; overall feeling: "Neutral"

"In my opinion, there still needs to be an option to speak to someone face to face or on the phone as that is the preferred communication modality for many." choice, channel preference

- Member of the public, female, 25-34; overall feeling: "Really happy"

"There are certain groups that will be affected e.g. those from areas of deprivation or higher diversity and allowances to continue with paper needs to be made there" demography, exclusion

- NHS colleague/manager, female, 25-34; overall feeling: "Really happy"

"Incredibly concerned about inequalities and leaving people behind."

concern, exclusion, discrimination

- Health screening practitioner, female, age 25-34; overall feeling: "Really unhappy"

"Also likely that individual organisations will print themselves, meaning poor quality printed leaflets will be given out." quality, printing

- Health screening practitioner, male, age 35-44; overall feeling: "Really unhappy"

"Whilst I'm online a huge amount I still like to come away from appointments with literature I can share with my partner, refer back to easily" channel preference

- Member of the public, female, 25-34; overall feeling: "Really unhappy"

"PHE has no idea how to implement this step and it's up to screening coordinators to find a way, without additional resources for maternity."

resources

- NHS colleague/manager, female, 25-34; overall feeling: "Really unhappy"

"This is something for the future."

readiness

- NHS colleague/manager, female, 35-44; overall feeling: "Really unhappy"

"I think that it is possible that patients will not go online to look at information and will therefore attend appointments without the correct information." concern, information

- Health screening practitioner, female, age 35-44; overall feeling: "Slightly happy"

"Main concern is about exclusion for those women with minimal access to technology"

concern, exclusion, women

- Health screening practitioner, female, age 45-54; overall feeling: "Slightly happy"

"I'm also concerned that messages may not reach people who don't speak English"

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- concern, language
-
- NHS colleague/manager, female, 45-54; overall feeling: "Slightly happy"
- "If the process was fully online, I would be concerned about not having a physical reminder in the form of a letter."** concern
-
- PHE colleague/manager, female, 45-54; overall feeling: "Slightly happy"
- "We deliver care to many women who do not have access to internet, have special needs, do not speak English etc"** concern, exclusion, language, disability
-
- Health screening practitioner, female, age 35-44; overall feeling: "Slightly unhappy"
- "The other issue we have as health promotion teams is that we do not have access to printers or budgets to print off leaflets so having access to hard copies for health promotion purposes would be good. Thank you"** cost, printing, promotion
-
- Health screening practitioner, female, age 45-54, **Asian, Muslim**; overall feeling: "Slightly unhappy"
- "We run the risk of a decrease in uptake of screening if we switch to online information."** Uptake
-
- Health screening practitioner, female, age 45-54; overall feeling: "Slightly unhappy"
- "It is easier to discuss things with clients if you have a paper copy in your hand and to give them to take away to reread later maybe with extra links"** information
-
- Health screening practitioner, female, age 55-64; overall feeling: "Slightly unhappy"
- "It takes longer accessing the information online than just reading through a leaflet that is at your fingertips."** Efficiency, readability
-
- NHS colleague/manager, female, 35-44; overall feeling: "Slightly unhappy"
- "If people have to do this it may discourage them from taking part in screening programmes?"** Uptake
-
- NHS colleague/manager, female, 45-54; overall feeling: "Slightly unhappy"
- "Disadvantages the elderly, can't take the leaflet with you to places and not everyone has an ability to access. "** Accessibility, convenience, age, inequality
-
- PHE colleague/manager, female, 45-54; overall feeling: "Slightly unhappy"
- "Also disadvantaged groups which we are trying to target may not have easy online access"** concern, exclusion, connectivity
-
- PHE colleague/manager, male, 45-54; overall feeling: "Slightly unhappy"

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"I feel the young people are more likely to access online and that they are overloaded with leaflets."

Age, convenience, findability

- Health screening practitioner, female, age 45-54, **longstanding illness**; overall feeling: "Neutral"
-

"Excellent idea it will be much more environmentally friendly, Online information, if designed correctly is more readable and easy to understand, more information can be available via additional links so people can read as much or as little as needed"

accessibility, sustainability, information

- Health screening practitioner, female, age 45-54; overall feeling: "Really happy"
-

"Patients can ask questions at screening if they want f 2 f."

Supplementing

- Health screening practitioner, female, age 55-64; overall feeling: "Really happy"
-

"It's environmentally friendly and may save money"

sustainability, cost

- Health screening practitioner, female, age **65-74**; overall feeling: "Really happy"
-

"I think leaflets get lost or left unread too easily."

Convenience, reach

- NHS colleague/manager, female, 35-44, **bi/polysexual**; overall feeling: "Really happy"
-

"Absolutely agree that digital is more cost effective and easier to access."

- NHS colleague/manager, female, 35-44; overall feeling: "Really happy"
-

"It will make it easier to update information and easier to link to FAQs and things to think about before and short films to help allay any fears or concerns."

Information, currency, video

- PHE colleague/manager, female, 45-54, **with a physical impairment**; overall feeling: "Really happy"
-

"I think it is a good idea although printed information should be available."

both

- Health screening practitioner, female, age 45-54; overall feeling: "Slightly happy"
-

"Less waste and ensures receipt"

reliability, waste

- Member of the public, female, age 45-54; overall feeling: "Slightly happy"
-

"Will help to save money and the environment by reducing paper waste"

Cost, paper, waste

- NHS colleague/manager, female, 55-64; overall feeling: "Slightly happy"
-

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