Qualitative consumer research to explore communications on food safety messaging

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Authors: Ipsos MORI (Polly Hollings, Lauren Porter and Daniel Cameron)

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Contents

How to read this report

For this report, our findings have been structured by theme in the following chapters:

- In chapter 1 we summarise the background and methodology of the study.
- In chapter 2 we provide a summary of a short desk review of previous relevant research carried out and summarise the approaches taken forward for testing in the research sessions.
- In chapter 3 we address the over-arching factors that have influenced participants' reactions to the approaches tested across the research.
- In chapter 4 we detail participant reactions to each of the general approaches tested: awareness raising; generating an emotional response; highlighting the social aspect of food safety; food safety in different environments and situations.
- In chapter 5 we discuss views towards messengers and channels for food safety messages.
- In chapter 6 we present the research conclusions.

The findings from this research have also been translated into a separate toolkit – The Food Standards Agency Food Safety Communications Toolkit – which provides principles and guidance for developing food safety communications.

While every attempt has been made to recruit a varied sample of participants, possible limitations include:

1. **Social desirability bias.** The findings rely on self-reported data from the depths and focus groups. As a result, it is possible that the findings reflect participants over-reporting socially desirable attitudes.
2. **Generalisability.** Qualitative research is designed to be exploratory and provide insight into people's perceptions, feelings and behaviours. The findings are therefore not intended to be representative of the views of all people who may share similar characteristics.

For full details on the sample see Annex B.

Throughout this report we have referred to “participants” as the individuals that have taken part in our research. Anonymised verbatim quotes have been used to help illustrate key findings, but these quotes do not necessarily summarise the views of all participants that we spoke to.

Executive summary

Background and objectives

The Food Standards Agency (FSA) is responsible for food safety across England, Wales and Northern Ireland. Ipsos MORI was commissioned to carry out research to understand current behavioural drivers and attitudes towards communicating food safety messages and how these may vary by audiences.

During analysis of the research findings, the COM-B framework[1,2] was applied to help understand how best to support behaviour change. These components are referenced in the research conclusions and were used to develop a framework for the FSA Food Safety Communication Toolkit.

Method and sample

An initial brief desk review scoping phase was carried out to explore existing knowledge regarding food safety behaviours and attitudes towards food safety communications. This was used to help inform the identification of four over-arching communication approaches. These were then tested across 30 online focus groups and 20 telephone depth interviews carried out across different demographic groups in England, Wales and Northern Ireland.

The four communication approaches were tested across 10 stimulus materials and are shown below, aligned to the relevant COM-B component.

1. Communication approach tested: **Awareness raising**

   Description: providing participants with facts and information about food safety and consequences, including scientific rational for this advice.

   COM-B component: Capability

[1] The COM-B framework outlines the conditions that are required for behaviour change to occur and explores any barriers to behaviour change that an audience may face. There are three components within the framework: capability, opportunity and motivation.
[2] Government Communication Service. Strategic Communications: a behavioural approach

2. Communication approach tested: **Generating an emotional response**

   Description: seeking to evoke feelings of fear, shock or disgust regarding the health consequences of food poisoning.

   COM-B component: Motivation

3. Communication approach tested: **Highlighting the social aspect of food**

   Description: encouraging participants to think about the duty of care to others and social aspect of food safety.

   COM-B component: Motivation

4. Communication approach tested: **Food safety in different environments**

   Description: exploring resonance with food safety in different situations.

   COM-B component: Opportunity

Please refer to the FSA Food Safety Communications Toolkit which sets out the findings from this research within the COM-B framework, which clearly set out key considerations to help enable behaviour change.

Key findings

The following subsections highlight:

- Four key factors influencing engagement in food safety. These factors emerged as influencing the extent to which participants engaged with the stimulus material on food safety which included: confidence and experience in cooking and handling food; personal experience of food poisoning; cultural norms; and heightened awareness of germs.

- Nine further factors influenced reactions to the approaches tested. These shaped participants responses to the messages. These included: perceived risk; experience of consequences; personal resonance of scenario; clarity and credibility of the message; clear rationale for food safe behaviours; practical and easy guidance; use of scientific terms and information; use of language, tone and phrasing; and use of images.

Factors influencing engagement in food safety

Four factors were identified as influencing the extent to which participants engaged in the messages included on the stimulus shared. These factors emerged as having greater influence on views compared to the demographic profile of participants.

1. **Confidence/ experience in cooking and handling food**: a spectrum of experience and confidence emerged across the research. Those with **higher** levels of confidence/ experience often felt that stimulus shown reinforced their existing motivations for food safe behaviours and highlighted behaviours that they already followed. Messages conveying 'new' information typically stood out for these participants. Those with **lower** confidence were generally open to learning about positive food behaviours but could disengage from messages that they felt were too complicated, vague or unclear.

2. **Personal previous experience of food poisoning**: those who had previously experienced food poisoning related more strongly to stimulus detailing the consequences of food poisoning.

3. **Cultural norms**: participants spontaneously described cultural norms that shaped some of their food safety behaviours, for example washing chicken and reheating rice. Whilst these behaviours were not specifically included in the stimulus tested, it was clear that there could be strong push-back from people in some ethnic minority communities if there was specific advice to stop or change these behaviours.

4. **Heightened awareness of/ concern about germs**: across the research some participants self-identified as being particularly concerned about germs. Stimulus that focused on germs or cross-contamination appeared to heighten this anxiety among these participants, which in some cases led them to disengage them from the message.

Reaction to approaches

Across the research the following factors emerged as important in shaping participant reaction to the stimulus materials.

1. **Perceived risk:** the extent to which participants recognised and practised the behaviours cited as risky.
2. **Experience of consequences:** whether participants had previously experienced food poisoning.
3. **Personal resonance of scenario:** the extent to which participants could relate to problematic food behaviours within specified scenarios, for example when cooking for others, at BBQs and at picnics.
4. **Clarity and credibility of the message:** clarity of the call to action.
5. **Clear rationale for food safe behaviours:** whether the message provided a clear link between food behaviours and consequences, and therefore provided a rationale for adopting new behaviours.
6. **Practical and easy guidance:** the perceived ease of adopting suggested behaviours.
7. **Use of scientific terms and information:** including reference to terms such as ‘E.coli’ and ‘listeria’, and facts about what temperature food should be stored at.
8. **Use of language, tone and phrasing:** the impact of language, tone and phrasing on overall engagement with the message.
9. **Use of images:** the extent to which images supported engagement in the message, and clarity of the behaviours referenced.

Below we set out the role that these factors played in shaping reaction to the different approaches tested.

1. Awareness raising

[COM-B component: Capability]

Awareness raising stimulus was designed to provide participants with facts and information about food safety and consequences, including scientific rationale for this advice.

1.1 Perceived risk:

Where participants recognised behaviours and felt they already took steps to mitigate these, the message had low impact but could reinforce positive behaviours. Where participants were not previously aware of risky behaviours and/ or admitted that they practised the risky behaviours referenced, there was some scepticism regarding the need to personally change these, especially where they had been practised for many years without issue.

1.2 Clarity and credibility of the message:

Where participants found the call to action unclear, they quickly disengaged from messages and called into question their credibility. Participants sought greater clarity and specificity for suggested behaviours particularly where these had been practised for many years without problem.

1.3 Clear rationale for behaviours:

Messages providing a clear link between behaviours and consequences were positively received as providing rationale for adopting new behaviours.

1.4 Practical and easy guidance:

Participants engaged with messages that suggested changes to behaviour that were easy to adopt and did not require new or specialist equipment.

1.5 Scientific terms and information:

Whilst there were mixed views towards naming specific bacteria - with some concerns that people may not recognise these - overall, participants found the visualisation of bacteria engaging.

1.6 Language, tone and phrasing:

Participants generally felt that messages could be improved by making them shorter and greater use of Plain English.

1.7 Images:

Whilst participants liked images that visually illustrated guidance, they felt that these could more clearly distinguish between correct and incorrect behaviours. There was desire for more realistic images portraying ‘everyday’ life.

2. Generating an emotional response

[COM-B component: Motivation]

Stimulus materials that sought to generate an emotional response aimed to evoke feelings of fear, shock or disgust regarding the health consequences of food poisoning.

2.1 Perceived risk:

Participants engaged in messages where these echoed existing concerns about food safety (for example handling raw chicken). Feelings of surprise and shock were expressed where messages referenced consequences of food poisoning that participants had not previously been aware of (for example kidney failure). However, there were mixed views towards using this ‘shock tactic’ to engage people in food safety messages, where some participants felt this could be off-putting, leading people to disengage with the message.

2.2 Experiences of consequences:

Reminding people of personal experiences of food poisoning consequences generated fear and a desire to avoid experiencing these again in the future

2.3 Scientific terms and information:

Referencing germs/ bacteria could emphasise the risk of behaviours and the serious nature of consequences, particularly where these highlighted the invisibility of risks.

2.4 Language, tone and phrasing:

Words such as ‘dangerous’ and ‘toxins’ could reinforce the serious tone of messages.

2.5 Images:

Images of the consequences of food poisoning captured participants’ attention but reactions to these varies at an individual level. These images were considered too hard-hitting for some.

3. Highlighting the social aspect of food safety

[COM-B component: Motivation]

Stimulus that highlighted the social aspect of food sought to encourage participants to think about the duty of care to others and the social aspect of food safety.

3.1 Experiences of consequences:

Those who responded positively to this approach were often those who had personally experienced food poisoning and were keen that family members, especially children, should not experience it.

3.2 Personal resonance of scenario:

Being mindful when cooking for family and friends broadly reinforced participants’ existing motivations around food safety. Younger and/ or less experienced participants responded positively to this approach. Their engagement may have been supported by the inclusion of guidance for suggested behaviours within these messages. Older/ more experienced cooks agreed with the social sentiment of keeping family safe but could find this approach patronising.

3.3 Images:

Whilst they could prompt participants to consider passing on good food safety habits across generations, there was concern that images of children cooking showed unsafe situations. Images portraying cooking with friends were met with mixed response, as for some participants who found cooking for friends stressful, this did not depict a relatable scenario.

4. Food safety in different environments and situations

[COM-B component: Opportunity]

Stimulus materials that showed food safety in different environments were designed to explore resonance with food safety in different situations.

4.1 Perceived risk:

Participants were mindful of food safety when cooking for others and recognised that this applied to both BBQs and picnics.

4.2 Personal resonance of BBQ scenario:

Participants acknowledged the risk of undercooking meat at BBQs. Older/ more experienced participants were conscious and careful of this; the message provided a useful reminder. Younger participants and those who had previously experienced food poisoning found this message informative.

4.3 Personal resonance of picnic scenario:

Picnics were not spontaneously mentioned as an event where participants were concerned about food poisoning or that participants took part in regularly. They tended to think of other instances of transporting food for example, packed lunches.

4.4 Images:

Participants suggested that images could reference wider situations where the food safe behaviours described in messages could apply for example, cooking meat on a grill in the home, transporting food for other occasions.

Views towards channels and messengers

Whilst no preference for a particular channel, or messenger was evident, participants' suggestions for messengers of information regarding food safety broadly reflected their current sources of information:

- Family as a trusted source of information and with a key role in educating children.
- Formal education via school lessons and in-school campaigns.
- In places where they interact with food, for example in supermarkets (physical and online), takeaway shops, butchers, university kitchens, places of work.
- Wider food industry, for example fridge and food equipment manufacturers.
- Food packaging and within recipe boxes.
- In places where they interact with health-related information, for example in GP surgery, hospitals.
- Celebrity chefs.
- An independent organisation with responsibility food safety.

Participants suggested a range of channels with older participants suggesting leaflets, posters, magazine adverts and radio adverts. Television adverts were mentioned across participants whilst others suggested social media.

Chapter 1: Background and methods

Research objectives and aims

The Food Standards Agency (FSA) is responsible for food safety across England, Wales and Northern Ireland. Their work includes protecting public health and consumers' wider interests in relation to food, as well as reducing the economic burden of foodborne illness. The FSA commissioned Ipsos MORI to conduct 30 online focus groups and 20 telephone depth interviews.

The research was designed to understand current behavioural drivers and attitudes towards communicating food safety messages and how these may vary by audiences. It aimed to answer the following research questions:

- Explore potential communication approaches for engaging the general public in good food safety and hygiene practices.
- Understand which communication approaches are most motivating and effective.
- Understand which approaches have more/ less appeal for different groups.
- Explore potential risks and opportunities for different communication approaches.
- Explore views towards communications focusing on specific food preparation behaviours relating to the 4 Cs[3] and specific, 'non-typical' food consumption occasions (for example at BBQs, picnics, hosting large numbers)
- Gather insights regarding preferences for channel and messenger.

Methodology and sample

The first stage of the project was a rapid scoping stage of existing research on the topic of food safety behaviours and communication testing. The outcomes of this phase were used by FSA and Ipsos MORI to support the development of

[3] The 4Cs of food safety are cleaning, chilling, cooking and cross-contamination.

approaches to engaging the public on food safety messaging to be tested in qualitative research sessions.

Fieldwork was conducted between 23rd February and 29th March 2021 across England, Wales and Northern Ireland. Participants either took part in a two-hour long video-enabled focus group, or a one-hour long telephone depth interview.

In 20 of the focus groups, participants from the general population were stratified by age and life-stage across England, Wales and Northern Ireland. In the remaining 10 focus groups, participants formed two groups each of Chinese, Black African, Black Caribbean, Pakistani and Indian minority communities.

Research sessions were structured to include a 'warm up phase' where participants discussed typical cooking behaviours and spontaneous views towards food safety. They were then shown up to six pieces of stimulus materials, designed to test potential approaches to communicating food safety. Finally, participants were asked their views towards potential channels and messengers for food safety messages. The discussion guide is provided in Annex D.

Context to the research: COVID-19

During the Covid-19 pandemic, a number of public information campaigns have focused on personal hygiene behaviours for example, the 'Hands. Face. Space' campaign. During this time there have also been frequent government statements regarding the pandemic that have used statistics and involved evidence from scientists, for example the slides and datasets to accompany the Coronavirus briefings. More broadly, imagery of the Covid-19 virus under a microscope have been used across media.

This context may have influenced the way in which participants related to or reacted to the food safety messages and stimulus shared in this research.

Application of the COM-B framework

During analysis of these research findings and development of the accompanying Food Standards Agency Food Safety Communications Toolkit, the COM-B framework[4] was applied to help set out the barriers to be overcome to support behaviour change.

The COM-B framework outlines the conditions that are required for behaviour change to occur and explores any barriers to behaviour change that an audience may face. There are three components within the framework:

- **C**apability: Are people psychologically and physically able to carry out the behaviour?
- **O**pportunity: Do people have the social and physical opportunity to carry out the behaviour?
- **M**otivation: Do people need or want to carry out this behaviour, more than other competing behaviours?

This report references COM-B:

- When describing the communications approaches tested in the research by mapping which components of COM-B each approach targeted.
- When drawing conclusions from the research to support the identification of behavioural barriers and/ or opportunities.

[4] Government Communication Service. Strategic Communications: a behavioural approach: https://gcs.civilservice.gov.uk/publications/strategic-communications-a-behavioural-approach/

Chapter 2: Building on existing insights

Desk review: key findings

To inform the design of the research, we conducted a brief review of previous relevant research carried out by the FSA. This included previous research to explore general public attitudes towards food safety and communications testing. We drew on nine FSA reports written between 2013 and 2020 (see Annex C for bibliography). Key findings from this scoping phase across food safety behaviours, habits and attitudes include the following:

Behaviours and habits: Food safety behaviours are often ingrained from youth, usually through parental guidance. This is particularly the case for ethnic minority groups where celebrating with food is central to community, culture and religion.[5] Behaviours may also be learned at school.

Food hygiene in different situations: Kitchen practices and food safety behaviour are often enmeshed. Depending on the social situation or set up of an individuals' home, food may not always be prepared in the kitchen, and therefore recommended food safety behaviours may not always be applied when preparing food.[6]

Perception of food poisoning: There is generally a low risk perception of food poisoning. It can be difficult to motivate a change in food safety behaviour unless an individual has had a personal experience of food poisoning. [7]

Awareness of 4Cs: Awareness of the 4Cs varies across different nations and age groups, with no clear pattern.[8] Across the 4Cs there is less clarity on behaviours surrounding chilling/ defrosting, and on storing/ using leftovers (especially amongst ethnic minority communities who tend to buy and cook in bulk).

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[5] Food Hygiene Practices and Attitudes among BME groups (2015), TNS BMRB
[6] Domestic Kitchen Practices: Findings from the 'Kitchen Life' study (2013), University of Hertfordshire and Food Standards Agency.
[7] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB.
[8] The Food and You Survey - Wave 5 Combined Report (2018), Food Standards Agency and NatCen.

Specific audiences: Women are generally found more likely to adhere to recommended practices for the 4Cs.[9] Older males are most difficult to reach and influence, as well as younger men.[10] Ethnic minority groups have considerable food safety knowledge but this does not always translate to good food safety practices.[11]

Reception to food safety messages: The parental (particularly female) audience is most receptive to food safety messages.[12]

Communicating safety messages: Consumers need a clear call to action and a 'way forward' with clear behavioural 'solutions'. [13]

Food safety during Covid-19: Consumers are more likely to eat food past use-by date, increasing the risk of food poisoning.[14]

Throughout the report we have highlighted where findings reflect or build upon those identified in the two key FSA reports:

- Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB.
- The FSA Risk Communication Toolkit V2 (August 2020), 2CV.

Approaches and behaviours taken forward

Building on the desk research and objectives for this study, stimulus (as shown in Annex E) were developed by FSA and Ipsos MORI to test reaction to the following approaches:

- **Awareness raising:** providing participants with facts and information about food safety and consequences, including scientific information (all stimulus).

[9] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB.
[10] ibid
[11] Food Hygiene Practices and Attitudes among BME groups (2015), TNS BMRB
[12] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB.
[13] ibid
[14] The Food System Under Covid-19 (2020), Bright Harbour.

- **Generating an emotional response**: seeking to evoke feelings of fear, shock or disgust regarding the health consequences of food poisoning (Stimulus 2, Stimulus 4, Stimulus 5 and Stimulus 6).
- **Highlighting the social aspect of food**: encouraging participants to think about the social and duty of care aspect of food safety (Stimulus 1, Stimulus 7, Stimulus 9 and Stimulus 10).
- **Food safety in different environments**: exploring resonance with food safety
  in different situations (Stimulus 8 and Stimulus 9).

These messages were further designed to cover a range of behaviours across the FSA 4Cs (cooking, cleaning, avoiding cross-contamination and chilling).

The message, which of the 4Cs behaviours and corresponding approaches used to explore and test, are detailed below for each stimulus. Each of the stimulus material have also been mapped against the three components of COM-B. Descriptions of what the stimulus depict are included throughout this report for reference and full-size versions of the stimulus with images can be found in Annex E.

1. **Stimulus 1: “You can help keep your family and loved ones safe. Always follow instructions on cooking times and temperatures.”**

   4C behaviour: Cooking

   Approaches tested: Awareness and social duty of care

   COM-B components: Capability and motivation

2. **Stimulus 2: “Remembering to wash fruit and vegetables helps remove bacteria like E.coli. E.coli can produce toxins that can lead to serious conditions like kidney failure.”**

   4C behaviour: Cleaning

   Approaches tested: Awareness and emotional response

   COM-B components: Capability and motivation

3. **Stimulus 3: “By checking that your fridge temperature is 5°C or below, you can stop harmful bacteria growing and keep food fresher for longer.”**

   4C behaviour: Chilling

   Approaches tested: Awareness

   COM-B components: Capability

4. **Stimulus 4: “Your chopping board might look safe, but is it? Using the same chopping board for raw and cooked food could make you seriously ill.”**

   4C behaviour: Cross-contamination

   Approaches tested: Awareness and emotional response

   COM-B components: Capability and motivation

5. **Stimulus 5: “Dangerous bacteria, like listeria, can grow each time food is cooled, stored, and reheated. This can cause fever, muscle aches, nausea or diarrhoea and can spread to the nervous system. Only reheat food once.”**

   4C behaviour: Cooking

   Approaches tested: Awareness and emotional response

   COM-B components: Capability and motivation

6. **Stimulus 6: “Store and prepare raw and cooked foods separately. You won’t be able to see cross-contamination of bacteria, but this can still cause food poisoning and make you very ill.”**

   4C behaviour: Cross-contamination

   Approaches tested: Awareness and emotional response

   COM-B components: Capability and motivation

7. **Stimulus 7: “Feast with friends safely by cooking food properly. Food needs to be cooked at 70°C for two minutes to kill bacteria.”**

   4C behaviour: Cooking

Approaches tested: Awareness and social duty of care

COM-B components: Capability and motivation

8. **Stimulus 8: "Always store picnic food in cool boxes kept below 5°C. Dangerous bacteria will grow when food is too warm."**

   4C behaviour: Chilling

   Approaches tested: Awareness, emotional response and environment

   COM-B components: Capability, motivation and opportunity

9. **Stimulus 9: "Protect your family's health by making sure meat like pork, poultry and minced meat (like burgers) are always cooked through, and the juice runs clear when cut."**

   4C behaviour: Cooking

   Approaches tested: Awareness, emotional response and environment

   COM-B components: Capability, motivation and opportunity

10. **Stimulus 10: "You can keep your family safe from food poisoning by only reheating leftover food once. Always check that reheated food is steaming hot all the way through."**

    4C behaviour: Cooking

    Approaches tested: Awareness, and social duty of care

    COM-B components: Capability and motivation

Chapter 3: Factors influencing engagement in food safety

Across the research, the following four factors were identified as influencing the extent to which participants engaged in the stimulus materials shared. These factors emerged as having greater influence on participant views than the demographic profile of participants. However, where any demographic differences were observed, these are reported.

- Confidence/experience in cooking and handling food
- Previous personal experience of food poisoning
- Cultural norms
- Heightened awareness of/concern about germs.

Confidence/ experience in cooking and handling food

A spectrum of experience and confidence emerged across the research. Those with **higher** confidence had often been cooking for a long time and felt that they had built up knowledge and experience. These participants were typically older or had children, were familiar with preparing food for family meals, and talked about cooking meals from scratch.

“Sometimes it’s the experience. You know how long it should take to cook a particular amount of food." (18+ years old, Black African, Wales)

Whilst these participants reported that they were confident in their approach to cooking and handling food it should be noted that this research did not observe in-home behaviours and therefore it cannot determine whether participants were following correct food safety procedures.

In some instances, participants noted that their knowledge of food safety came from their work where they had completed hygiene courses or received food safety training. This included those who worked with vulnerable adults (for example, support workers), those working with children (for example, school) and those

who had previously worked in a food-related industry (for example, café, supermarket). These participants noted that they applied learnings from these jobs to their home lives.

Younger participants with higher levels of experience / confidence described having a particular interest in food and cooking, often experimenting with or trying new recipes. These participants noted that they had learnt about food safety at school and from family members.

Those with higher levels of confidence or experience often felt that stimulus shown reinforced their existing motivations for food safe behaviours and highlighted behaviours that they already followed. As a result, these participants perceived many of these messages to be aimed at younger people and those who were less experienced.

Messages that stood out for these more confident participants were typically those that provided information that was new to them. Examples of 'new' information included referencing the temperature that fridges should be set to (in Stimulus 3), or explaining why fruit and vegetables should be washed (in Stimulus 2) if participants were unfamiliar with the specific link to E.coli.

"I learned something new in washing the fruit and vegetables. I do wash the fruit anyway, but I'm going to wash it more thoroughly. I learned something new." (55+ years old, Northern Ireland)

Those with **lower** confidence were typically newer to cooking and described a limited cooking repertoire. They were less likely to cook from scratch and were typically younger participants who were cooking for themselves rather than other people. Some described how they had improved their cooking skills during lockdown, having more time at home to try new recipes.

Participants with lower experience and confidence were generally open to learning about positive food behaviours and had questions around different aspects of food safety. For example, these participants raised questions around whether food needed to be cooled before being placed in a fridge, how to defrost food safely, how long foods could be kept in a freezer, and how quickly food should be used once

taken out of a freezer. However, these participants could disengage from food safety messages that they felt were too complicated, vague or unclear, or that suggested behaviours they felt were unachievable.

Previous personal experienced of food poisoning

Those who had previously experienced food poisoning related more strongly to stimulus that explicitly focused on the consequences of food poisoning. This was particularly the case where food poisoning had been the result of their own actions (for example, eating undercooked meat).

“If you’ve had food poisoning, seeing an image like that will bring that back." (25-54 years old, no children under 18 years old at home, South East England)

Participants with close family members who had experienced food poisoning also related to these messages, as they had seen first-hand the consequences of food poisoning. Those who had experienced food poisoning often engaged with stimulus invoking a social responsibility or duty of care. They were keen to mitigate the risks around family and friends experiencing food poisoning.

Cultural norms

Participants spontaneously described cultural norms that shaped some of their food safety behaviours. Washing chicken was mentioned across the ethnic minority groups. Those who said they washed chicken described learning this from their family and community. Whilst participants were sometimes aware of the potential dangers of the behaviour, they noted that it had been practised for generations without any negative consequences.

"Quite controversial about this washing of chicken but for many of us it’s an important and essential part of food prep and would be seen as part of our food hygiene process as well.” (18+ years old, Black Caribbean, Midlands)

Those that did not wash chicken but previously had, included one participant who had learnt about the related dangers when completing a hygiene course as part of their work at a school, and another who had seen information about the risks in a television documentary.

Washing chicken was also mentioned across groups in Northern Ireland (typically amongst groups with people aged 25+ years). These participants noted that whilst they did not wash chicken (citing adverts they had seen regarding the dangers of this), they had seen this behaviour amongst older relatives.

"When mum was alive, she said always wash the meat. It's not a topic that you bring up around here because some people do it and some don't." (55+ years old, Northern Ireland)

Reheating and storing rice was also mentioned across ethnic minority groups (particularly amongst Indian and Chinese participants); this was also a behaviour that people were generally mindful of across the research. Behaviours were mixed. Some reheated rice and noted that this reflected behaviours within their family and community that they had learnt when younger. Those that had adopt new behaviours had done so after finding out more about the risks of reheating rice. For example, one participant had learned about this after moving away from home.

"I suppose, from growing up, my parents would always reheat rice, so I assumed it was okay to do that. When I moved away from university and I started to cook for myself, I looked up how to reheat rice, and most of the articles said to avoid it and cook fresh rice. I suppose it's through research and branching out to cook for myself." (18+ years old, Chinese, North England)

Whilst washing chicken and reheating rice were not specifically included in the stimulus tested, it was clear that there could be strong push-back from people in some ethnic minority communities if there was specific advice to stop or change these behaviours.

Heightened awareness of/ concern about germs

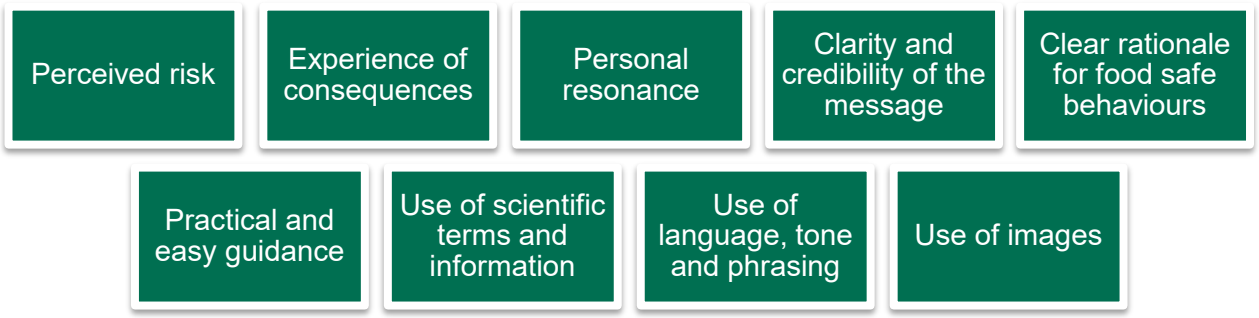
Across the research a small number of participants self-identified as being particularly concerned about germs, describing routines for cleaning and ensuring they avoided cross-contamination of foods.

"I find with chicken again I’m quite OCD about cleaning what the chicken’s touched, I’ve got a separate sponge for my chicken chopping board."
(25-54 years old, no children under 18 years old at home, North Wales)

Stimulus that focused on germs or cross-contamination appeared to heighten this anxiety which in some cases led them to disengage them from the content of the message (seen in Stimulus 6, Stimulus 4 and Stimulus 2). As they already felt vigilant and sometimes anxious about food preparation practices, the explicit focus on and warnings about germs or images that generated feelings of disgust (for example, consequences of food poisoning) were considered unnecessary.

Chapter 4: Reaction to approaches

Across the research, the following factors emerged as important in shaping participant reaction to the stimulus materials.



- **Perceived risk:** the extent to which participants recognised and practised the behaviours cited as risky.
- **Experience of consequences:** whether participants had previously experienced food poisoning.
- **Personal resonance of scenario:** the extent to which participants could relate to problematic food behaviours within specified scenarios, for example when cooking for others, at BBQs and at picnics.
- **Clarity and credibility of the message:** clarity of the call to action.
- **Clear rationale for food safe behaviours:** whether the message provided a clear link between food behaviours and consequences, and therefore provided a rationale for adopting new behaviours.
- **Practical and easy guidance:** the perceived ease of adopting suggested behaviours.
- **Use of scientific terms and information:** engagement in terms such as ‘E.coli’ and ‘listeria’.
- **Use of language, tone and phrasing:** the impact of language, tone and phrasing on overall engagement with the message.
- **Use of images:** the extent to which images supported engagement in the message, and clarity of the behaviours referenced.

Each of the following sections identifies which of the above factors played a key role in influencing participant views towards the approach under discussion. However, it should be noted that all stimulus materials included an ‘awareness raising’ approach and therefore reaction to other approaches may have been influenced by this.

Awareness raising

This section of the report brings together participant responses to stimulus that sought to raise awareness of behaviours that could lead to food poisoning and the potential consequences of these. All of the stimulus tested in the research included awareness raising facts. The following factors emerged as important when using an awareness raising approach:

- Perceived risk
- Clarity and credibility of the message
- Clear rationale for food safe behaviours
- Practical and easy guidance
- Use of scientific terms and information
- Use of language, tone and phrasing
- Use of images

Perceived risk

Participants often recognised the risky behaviours referenced in the stimulus materials and reported that they already took the steps detailed to avoid food poisoning. This was particularly the case for who those who were more experienced/ confident in handling food. In these instances, participants felt that the information provided a useful reminder but was unlikely to change their own behaviours. Across the research, participants suggested that the messages would provide useful guidance and/ or reminders for other people such as those less experienced in cooking, those with caring responsibilities and those who may have become ‘complacent’ or fallen into poor food safety habits.

Messages that referenced behaviours that participants recognised as ‘high risk’ were often positively received. For example, participants spontaneously noted that handling raw chicken was a situation when they were particularly mindful of food safety.

"[Stimulus 4, raw chicken], that's the one we all think about that gives us food poisoning if we don't prepare it properly or maintain hygiene whenever we're preparing it, washing the chopping board." (55+ years old, Northern Ireland)

Again, participants felt that these messages provided useful reminders for correct behaviours and important guidance for those with less cooking experience.

However, messages that provided information about risky behaviours and consequences that participants had not previously been aware of were more engaging. For example, many participants (across a range of ages with different levels of cooking experience and confidence) had not previously been aware that not washing fruit and vegetables (as referenced in Stimulus 2) could be a risky behaviour and lead to a serious consequence (kidney failure).

"It's something new, it's different. The fact it [Stimulus 2] mentions kidney failure and washing fruit and vegetables is new information or new-ish." (25-54 years old, have children under 18 currently living at home, South Wales)

This was particularly engaging for those who cooked mainly vegetarian meals and had previously thought that food safety focused on handling meat.

Views were mixed where messages highlighted a behaviour that participants currently practised as risky. Strong concerns regarding any related consequences cited in the message could prompt participants to report that they would consider changing their behaviour.

"When you see the kidney failure [Stimulus 2] you think, 'maybe I need to start' [washing my fruit and vegetables]." (25-54 years old, have children under 18 currently living at home, Northern Ireland)

However, scepticism regarding the likely risk of this behaviour was often expressed by participants who had been practising this behaviour (for example when reheating rice or not washing fruit and vegetables) without issue for a long period of time. These participants pushed back on the implication that they were doing something

'wrong' (reflecting previous FSA research[15] findings that consumers can be defensive about their own practice) and questioned the risk of experiencing the consequences cited in the statements.

"For someone who reheats rice more than once… if I was reading this I'd be like, 'Oh shut up', I wouldn't take it seriously. It's got stuff like the outcomes that could happen, but they just don't seem serious." (25-54 years old, no children under 18 years old at home, North Wales)

In these instances, participants felt that statistics detailing numbers of people who experienced food poisoning as a result of the behaviours highlighted in the messages would help improve the credibility of and convey the risk likelihood.

"When you use percentages, people take it more seriously. With one in ten, people think 'I could be that one in ten'. It's more personal." (18+ years old, Black African, South East England)

Previous FSA research[16] suggests that hard-hitting statistics could lend credibility to serious messages and that presenting these within case studies or using a relative risk approach (describing the severity of effects in comparison to something else) could help make these feel personally relevant. The FSA Risk Communication Toolkit[17] provides guidance for different ways for presenting both absolute risk (referring how likely the risk is) and relative risk approaches.

Clarity and credibility of the message

Where participants found the call to action unclear, they quickly disengaged from messages and called into question their credibility. For example, the message "food needs to be cooked at 70°C for two minutes to kill bacteria"' (in Stimulus 7) was frequently cited as confusing and not something that could easily be applied.

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[15] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 15.
[16] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 31.
[17] The FSA Risk Communication Toolkit V2 (August 2020), 2CV, Page 5.

“It sounds more scientific than a practical tip. You wouldn’t cook anything for 2 minutes at 70 degrees.” (25-54 years old, no children under 18 years old at home, North England)

Participants were unclear which types of food this message applied to, how they could easily take the temperature of the food without a food thermometer, or why this was necessary. Across the research there was concern that less experienced cooks may take this instruction at face value, only thinking food needed to be cooked for two minutes, which could be dangerous.

Further detail was also sought for messages that participants felt were ‘broad-brush’ in their approach. For example, what types of foods were particularly important to keep cool for picnics (Stimulus 8), or whether there were particular foods that should not be reheated twice (Stimulus 5).

Some messages also raised questions amongst participants, causing some debate within focus group sessions. For example, participants sought clarification on points such as:

- How quickly bacteria can grow on food when transporting a picnic (Stimulus 8).
- Why minced meat burgers need to be cooked through when red meat can be eaten rare (Stimulus 9). Although it should be noted that some participants, particularly those from ethnic minority groups, reflected that they would cook all meat thoroughly.
- How fridges (Stimulus 3) and cool boxes (Stimulus 8) should be stocked properly.
- How best to wash fruit and vegetables (Stimulus 2), for example asking if this was to be done with hot or cold water and whether vegetables still needed to be washed if they were to be boiled when cooked.
- How to check fridge temperatures with different kinds of fridge thermometers (Stimulus 3).
- How to transport hot picnic food safely - mentioned more in ethnic minority groups where hot food appeared to be more frequently eaten at picnics (Stimulus 8).

This desire for greater specificity in messages often came from those who expressed scepticism about the need to change behaviours that they had been personally practising without problem.

Clear rationale for behaviours

Credibility of messages was further reinforced where participants felt they understood why behaviours were beneficial and would prevent food poisoning. Credible risk emerged as important in the previous FSA research[18] which highlighted the importance of providing a reason to change behaviour. Messages demonstrating a clear link between food behaviours and consequences were received positively by participants across the research. For example, information about the presence of specific germs and bacteria and consequences of eating these helped participants make the link between behaviours and potential negative outcomes (particularly seen in Stimulus 2).

"[Stimulus 2 is] showing what happens if it goes wrong: 'This is why you need to wash them and this is what could happen'...That's a better way to get the messaging across...It's got our brains going more." (25-54 years old, no children under 18 years old at home, South Wales)

The images shown in Stimulus 4 (depicting a chopping board with raw chicken, and another image of woman vomiting) also provided a clear link between behaviour and consequence.

"Using the same chopping board is cross-contamination. I think showing the woman being sick reinforces that you can get food poisoning from the cross-contamination." (18+ years old, Black Caribbean, Midlands)

Participants particularly felt that Stimulus 8 (which depicted a family on a picnic and an image of a cool box with the message "Always store picnic food in cool boxes kept below 5°C. Dangerous bacteria will grow when food is too warm.") could be

[18] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 59.

strengthened by providing further rationale for adopting such as images to show how bacteria would grow on food if not kept below 5°C.

"People need to see the bacteria. They need to show what could happen if the food is too warm instead of a happy family having a picnic. Maybe an image with UV light showing how the bacteria is growing. People will take that more seriously… People need to see to believe. If they don't see it, they won't believe it." (18+ years old, Chinese, North England)

Overall, participants reflected that rationale for adopting behaviours and the risk of consequences in general could be strengthened through the use of statistics.

"Maybe a statistic would change my mind of how likely it is to happen. Right now, all I know is that washing it can help and all my life I've never done it. There's nothing more there that would make me want to change the way I prepare food...like, '60% of people that don't wash their veg have kidney failure.' Some statistic like that." (25-54 years old, no children under 18 years old at home, South Wales)

Practical and easy guidance

Participants were particularly positive about messages that suggested changes to behaviour that were easy to adopt. This reinforces previous FSA research[19] that found positive reaction to small achievable changes.

Across the research, Stimulus 3, which provided information on the benefits of checking your fridge temperature, was often received positively across the groups. Many saw this as a quick and easy-to-remember task they could complete themselves (and many noted that they planned to do this following the research session). Participants noted that this behaviour would also have the benefit of keeping food fresher for longer.

However, those less sure about this advice raised concerns that their fridge may not have a temperature display. This concern was often prompted by the image of the

[19] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 57.

fridge included in the stimulus with participants noting that it looked like a modern and ‘state of the art’ fridge which was different to the type of fridge in their own kitchen.

Ensuring that guidance was clear and specific was also important. For example, specific guidance for how to check meat was cooked through in Stimulus 9 which depicted a BBQ scenario, and the message reading “the juice runs clear when cut” was considered helpful (especially for those who were younger and less experienced) as it described a particular action.

“The juice running clear when cut is a good one. It’s quite descriptive and is better than saying ‘make sure it’s always cooked’, because you would think of different things.” (18-24 years old, Northern Ireland)

Overall, participants tended to disengage from messages where the call to action was considered confusing or difficult. For example, in Stimulus 8, which encouraged keeping picnic food cool, the specific reference to keeping food 5°C or below was considered unachievable. Participants felt it would be difficult to determine the exact temperature of the food and expressed resistance to the idea of needing to purchase specialist or new equipment (for example, cool box or food thermometer) to adopt a behaviour.

“How will you know it’s 5 degrees? Most of us don’t check the temperature of our cooked meat let alone stored food.” (25-54 years old, have children under 18 currently living at home, South Wales)

Some suggested changes that could make the behaviours detailed in the message easier to adopt. These included providing ideas for different ways to keep food cool (for example, using ice blocks) or asking people to think about the temperature of refrigerated food when thinking about how cool to keep food for a picnic.

“Yes, and give an example of 5 degree Celsius. Sometimes you can get information about temperatures. Instead of saying 5 degrees Celsius, say ‘two packs of ice cubes would be enough’. Say something that can make the person know.” (18+ years old, Black African, Wales)

The feasibility of taking temperatures of cooked foods was also raised as a barrier in relation to Stimulus 7 which states that “food needs to be cooked at 70°C for two minutes to kill bacteria”.

Similar concerns regarding feasibility of adopting a behaviour were also raised for Stimulus 1 (which depicted a family cooking together and food cooking in an oven), reading: “Always follow instructions on cooking times and temperatures”. Participants felt that this was not possible if they were cooking different foods with different instructions in one oven for the same meal. This behaviour did not feel achievable and therefore participants tended to disengage from this message.

Use of scientific terms and information

Referencing specific bacteria (such as E.coli in Stimulus 2 and listeria in Stimulus 5) received mixed responses across the research. E.coli appeared to be more readily accepted as many had previously heard of it and recognised it as potentially dangerous in a food situation. However, many participants did not recognise the term ‘listeria’.

There were mixed views on whether it was useful to specify a particular form of bacteria. Those who felt this would be useful noted that it provided the reader with a concrete reason to follow the behaviour specified in the stimulus.

“It’s informative. ‘Bacteria’ is a vague word. You have good and bad bacteria. Saying, ‘E.coli’, it points a finger at why you do it.” (18-24 years old, South Wales)

These participants further felt that naming the bacteria gave the message a serious tone.

Those less positive towards the use of a specific term, particularly ‘listeria’, felt that it could cause confusion because people would not recognise it.

"It's a little technical. I don't know why you need to know that the bacteria is listeria. That could be dropped. Just say dangerous bacteria. I don't know much about listeria, just that it's a dangerous bacteria." (25-54 years old, no children under 18 years old at home, Northern Ireland)

Scientific images, such as the image of a magnifying glass looking at bacteria on fresh vegetables in Stimulus 2, resonated well with participants who found these engaging. Some noted that they had become more familiar with images of germs during the pandemic. Others positively referenced advertising they had seen depicting invisible germs.

"It's the way it's presented as well, using the technology to show, darken, where the bacteria is. It brings it home, using technology to get the point across." (55+ years old, Northern Ireland)

The FSA Risk Toolkit[20] provides guidance on using graphics to illustrate risk, noting that they can support people in understanding risk and increase emotional engagement with the message.

Use of tone, language and phrasing

Across stimulus participants preferred short messages that they felt were 'to the point' and more impactful. For example, Stimulus 5 (which depicted someone reheating food, and then an image of a woman vomiting) was considered lengthy: "Dangerous bacteria like listeria, can grow each time food is cooled, stored and reheated. This can cause nausea or diarrhoea and can spread to the nervous system. Only reheat food once." Whilst participants felt that the detail regarding symptoms could be helpful in clarifying why the behaviour should be followed and stressing the serious nature of the consequences, the message felt less impactful and the final instruction to "only reheat food once" could be overlooked.

The use of language across messages was also noted and some terms considered potentially unclear particularly by those who did not have English as a first language, or those with less cooking experience. This included "poultry" (in Stimulus 9),

[20] The FSA Risk Communication Toolkit V2 (August 2020), 2CV, Pages 6-7.

“nervous system” (in Stimulus 5), “cross-contamination” (in Stimulus 6) and “runs clear” (in Stimulus 9). Participants felt that a Plain English approach would support people in understanding these terms.

Views towards tone of messages emerged across the research, although there were no clear patterns for preferences. Those that preferred a stronger, more directional tone (for example in the case of Stimulus 8) noted that this felt more compelling and effective in encouraging them to think about making a change to their behaviour. However, this tone was considered disengaging by others especially where they felt it questioned a behaviour that they had been practising without any issue. A softer, more conversational tone (seen in Stimulus 3, for example) was preferred by those who found this tone ‘friendlier’.

“This is a suggestion, not an instruction. On the other ones, we all went ‘hang on, I think I know better’. I am more receptive [to a softer approach] than when someone says, ‘do this, do that.” (25-54 years old, have children, Midlands)

There was positive reaction to the use of a rhetorical question in Stimulus 4 – “your chopping board might look safe, but is it?” - and the use of the words ‘you’ and ‘your’. Participants felt that this phrasing directly asked them to consider their own behaviour and acted as a useful reminder to consider how they use chopping boards. It should be noted that using different chopping boards was a behaviour that participants spontaneously cited as important and ‘high risk’ across participants and this may have played a role in the positive reaction to being directly prompted to consider this behaviour.

“It [Stimulus 4] makes you think, ‘Have I ever used the same chopping board?’ The question makes you think more than a statement." (18-24 years old, South East England)

Use of images

Images were considered helpful to support understanding of the message for example, as mentioned above, participants responded positively to images of germs that they felt helped to bring the invisibility of germs to life. There was also positive reaction to images that helped to make messages clear by visually illustrating tips for how to adopt correct behaviours such as “checking for clear juices when poultry

is thoroughly cooked" (Stimulus 9). It was suggested that images could further provide clear instruction by comparing poor and desired behaviours but would need to clearly signpost whether the behaviours depicted were correct. This view was prompted by concerns that the image of a chopping board with both raw chicken and carrots side by side in Stimulus 6 could cause confusion as some may be unclear whether this was depicting a correct or incorrect behaviour.

"I think maybe if the X was on the raw vegetables or somewhere on that chopping board to say this is wrong." (18+ years, Indian, Midlands)

Images also played an important role in showing situations that participants could relate to. They were considered less engaging where they did not reflect peoples' lives or lacked a sense of 'realism'. Participants easily disengaged from images that for example showed glossy kitchens that looked too luxurious. They also struggled to relate to images showing situations that they were unfamiliar with for example, some participants reflected that they rarely cooked with friends (as depicted in Stimulus 7) and some (particularly participants from Indian and Pakistani groups) noted that they did not often use microwaves (as depicted in Stimulus 5 and Stimulus 10).

Across the research a small number of participants responded positively to the image of an organised fridge (as shown in Stimulus 6) noting that it looked pleasing and aspirational. Typically expressed by females, this reinforced their own personal preferences for storing foods, and generally keeping things organised in their home.

"I think with the images on the bottom left picture with everything stored in containers, there's something about that image where it looks quite nice and you can see everything is safely stored away in plastic. Reading that statement would make me think about how I store everything in my own fridge." (18-24 years old, North Wales)

Generating an emotional response

This section of the report brings together participant responses to stimulus materials designed to present the potential consequences of food poisoning and cause an emotive response.

Across the research participants recognised that information regarding the consequences of food poisoning were intended to grab their attention and provide motivation for food safe behaviours. Avoiding the consequences of food poisoning was something that participants could relate to but there were mixed views on how this was put into practice, and how engaging this was. Overall, responses to emotive stimulus were influenced by:

- Experience of consequences
- Perceived risk
- Use of scientific terms and information
- Use of language, tone and phrasing
- Use of images

Experience of consequences

Reminding people of personal experiences of food poisoning consequences generated fear and a desire to avoid experiencing these again in the future echoing previous FSA research[21]. Participants related to the consequences of food poisoning that they had personally experienced such as vomiting. Whilst not all participants had personally been sick as a result of food poisoning, they could recall times when they had been sick for other reasons. Images used in stimulus showing people being sick (Stimulus 4 and Stimulus 5) acted as a vivid reminder of this experience and participants were keen to avoid this type of illness in the future.

[21] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slides 35-36.

"When I saw that woman over the toilet [Stimulus 4] it made me think of the feeling when you're being sick, that feeling in the back of your throat. It made me think I need to change my chopping board." (25-54 years old, have children under 18 years old at home, Northern Ireland)

Referencing vomiting as a result of food poisoning elicited a particularly strong response from those who had personally experienced this.

It was noted that images portraying vomiting could be improved as they suggested to some that the individual was experiencing morning sickness, or a hangover.

Perceived risk

Reaction to the consequences of food poisoning depicted in the messages was influenced by participant engagement in the behaviours referenced alongside these. As discussed earlier, where participants had been practising behaviours highlighted as risky within messages for a long time without issue, there was some scepticism that there was a high risk of experiencing the consequence. In these instances, participants were less likely to report a strong sense of concern or fear for consequences.

However, where messages reflected existing concerns, such as handling raw chicken, there was concern regarding the risk of these behaviours and the consequences that they could lead to.

"I think cross-contamination is a huge one. I know examples of other people who have ended up with food poisoning from using the same chopping board to cut meat and then cut the rest of the vegetables going in the same dish. (18-24 years old, North Wales)

Where messages referenced consequences of food poisoning that participants had not previously been aware of (for example, kidney failure, impacts on the nervous system) participants expressed feelings of surprise and shock. For example, many participants had not previously been aware that not washing fruit and vegetables could lead to kidney failure (as highlighted in Stimulus 2). The mention of an illness that would require hospitalisation was particularly concerning for some, which they felt would prompt people to follow the advised behaviour.

"The message [Stimulus 2] is great because it's telling people to wash fruit and veg, not everyone washes their fruit when they're going to eat it. Also, it's telling them the worst that can happen, so that's good that it frightens people a little bit." (18+ years old, Indian, Wales)

However, whilst participants recognised that information and images about the consequences of food poisoning provided a 'shock factor', there were mixed views on using this approach to engage people in food safety. Those positive towards this type of approach felt that severe consequences should be highlighted to bring to life the importance of food safe behaviours. A few felt that the stimulus could go further by using more hard-hitting imagery of the consequences, referencing the approach taken in smoking cessation campaigns. However, for some participants who described themselves as being more concerned about germs and hygiene, they felt this approach caused unnecessary anxiety, especially where they had been practicing these behaviours without issue for a long time.

Use of scientific terms and information

Referencing germs/ bacteria could emphasise the risk of food behaviours and the serious nature of consequences, reinforcing feelings of shock and fear. For example, Stimulus 2 referenced E.coli which participants recognised as potentially dangerous in a food situation, often relating this to meat and eggs. However, some participants expressed feelings of surprise and shock when E.coli was linked to washing fruit and vegetables (a behaviour that they often associated with removed dirt and pesticides).

The invisibility of germs and/ or bacteria resonated with participants. Participants recalled adverts or footage in television documentaries that used ultra-violet lighting to show the hidden presence of germs/ bacteria. The images in these adverts had remained in their minds and brought to life the risks of issues such as cross-contamination. Whilst the context of Covid-19 may have heightened participant awareness of, and interest in this type of imagery, participants responded positively to their inclusion.

“I like the magnifying glass as it shows you what’s in there. What you could be putting in your mouth.” (55+ years old, Midlands)

Reference to the invisibility of germs/ bacteria when included within the text was also positively received with suggestions for images to accompany these references (for example, in Stimulus 6 to accompany the text “you won’t be able to see cross-contamination of bacteria”). This reinforces previous FSA research[22] that found that images of germs/ contagion had cut-through.

Use of tone, language and phrasing

The use of language across messages was noted with participants reflecting that some words and phrases could reinforce the serious tone of messages further evoking concern regarding the consequences of food poisoning. For example, “dangerous”, “poisoning”, “toxins” and “seriously ill” were all cited as contributing to a serious tone to messages.

The kidney failure, toxins, serious conditions. They’re using lots of strong words." (18+ years old, Chinese, South East England)

Use of images

Participants recognised that there could be a fine line with the use of images to convey the consequences of food poisoning, sometimes noting that they evoked feelings of unease or disgust but simultaneously captured their attention.

"Maybe that image of the girl being sick, the fact that we’re discussing it so much, it is getting the message across, the fact you’re seeing something you don’t like. It’ll stick in your head." - view comes from someone who has experienced being sick like that so resonates. (55+ years old, Northern Ireland)

In a few instances, participants expressed strong dislike to this approach, commenting that images of the consequences of food poisoning were an

[22] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 15.

unnecessary ‘shock tactic’. This echoes previous FSA research[23] findings regarding ‘pushback’ towards graphic images.

Participants who disliked this approach noted that details and images regarding the consequences of food poisoning made them feel uncomfortable.

It’s got the shock factor and it’s quite emotive, with the dangerous bacteria and the nervous system. You’re more scared into not doing it...Sometimes you just wouldn’t want to read it because it would make you feel a bit nervous or ill. It depends on what you’re feeling that day. (18-24 years old, Northern Ireland)

One participant pushed back on these images whilst reflecting that there had been many images of hospitalised people during the Covid-19 pandemic. Those who felt uncomfortable with these types of images - particularly the image depicting someone with kidney failure (like in Stimulus 2) - comprised a range of participants and included a small number of participants who were generally anxious about germs and hygiene.

A couple of participants further expressed concern that overly negative messaging about the consequences of food poisoning could generate anxiety and ultimately deter people from cooking.

“If I read this [Stimulus 5] it would put me off cooking more, doing stuff myself more than actually just reheating.” (25-54 years old, no children under 18 years old at home, North Wales)

Highlighting the social aspect of food safety

This section of the report brings together participant responses to stimulus materials designed to present the social aspect of food safety.

[23] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 35.

Overall, the social and duty of care approach generated mixed reactions across the research. This chapter explores:

- Experience of consequences
- Personal resonance of scenario
- Use of images

It should be noted that for a few participants, the overall social and 'duty of care' approach was questioned.

"What about yourself, if you don't have family or a loved one? You might just be cooking for yourself? It [Stimulus 1] just doesn't read quite right to me, to be honest." (25-54 years old, have children under 18 years old at home, Midlands)

These participants felt that people should be mindful of taking action to avoid food poisoning when cooking for themselves, and that the focus should not just be on cooking for family and friends. This could be related to people's heightened awareness of their own personal health and safety during the pandemic.

Experience of consequences

Previous experience of food poisoning influenced reaction to the social/ duty of care approach. Those who responded positively to this approach were often those who had personally experienced food poisoning. These participants described how unpleasant and uncomfortable food poisoning can be and expressed a sense of responsibility in preventing food poisoning amongst family members, especially children.

"As soon as you bring family into it, people really stop and think about how they're cooking their food and they're not cooking to how they like it, they're cooking so it's safe for everybody. Yes, it would. I've experienced food poisoning before from a burger and I know it's horrible. I wouldn't want anyone else to have to experience that." (18-24 years old, South East England)

Personal resonance of scenario

Being mindful when cooking for family and friends broadly reinforced participants' existing motivations around food safety reflecting previous FSA research[24] findings that a sense of duty of care and responsibility can be a powerful approach to engaging people in food safety.

"I guess it would appeal to me. I have a family, so I guess it's emotionally charged, and it makes you more aware of making sure your food is cooked thoroughly." (18+ years old, Black African, South East England)

However, as discussed below, reaction to this approach was influenced by attitudes towards the behaviours referenced within the messages.

Younger and/ or less experienced participants tended to raise concerns about cooking for others especially vulnerable family members.

"I don't look at it too much when I'm cooking for myself. I've been cooking for my grandparents in lockdown. I'm more vigilant to make sure I'm following more fully. Keeping your loved ones safe, you're more conscious about it." (18-24 years old, South Wales)

These participants typically responded positively to social messages, especially those that mentioned family. Phrases such as "keep your family safe" (like in Stimulus 10) and "protect your family's health" (in Stimulus 9) captured their attention as they were keen not to be responsible for their families falling ill from food poisoning. In some instances, participants with young families mentioned being drawn to these messages as they were particularly mindful of food safety when

[24] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 27.

preparing food for their children. For example, one participant with a two-year old son explained that his initial reaction was to be protective, and therefore the message captured his attention. Another participant expressed how keeping family safe stood out when reading the message.

"I probably pay more attention to food safety when I'm making my little girl's food, making sure it's cooked thoroughly to stop cross-contamination. I wouldn't want to make her unwell." (25-54 years old, have children under 18 years old at home, Midlands)

Engagement amongst these participants may have been supported by the inclusion of suggested behaviours (for example, "juices runs clear when cut" as in Stimulus 9) provided in the messages. In general, younger/ less confident cooks were open to learning more about food safety and therefore may have positively engaged in this approach because it provided guidance for how to keep family safe. This reinforces previous FSA research[25] that found that young adults were less confident in their own practice regarding food safe behaviours were more likely to engage in an approach focused on keeping family safe, if accompanied by simple, clear guidance.

Whilst older participants who considered themselves more experienced cooks, agreed with the sentiment of keeping their family safe, they did not feel that this approach was personally engaging. These participants noted that they already thought about keeping their family safe, and therefore this would do little more than act as a reminder (echoing previous FSA research[26] findings).

"[Keep your family safe], It goes without saying, to be honest." (18+ years old, Chinese, North England)

In some instances, participants reacted defensively to the messages where they perceived the stimulus to be 'patronising' (also noted in previous FSA research[27]).

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[25] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 54.
[26] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slides 29 & 53.

[27] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 53.

These participants responded negatively to any suggestion that they would not automatically be thinking of the safety of others.

"It's a little bit patronising. I don't think anyone would intentionally cook a meal with the intention of poisoning anybody. That's a little bit over the top." (25-54 years old, have children under 18 years old currently living at home, South Wales)

It was further noted that placing responsibility on the individual could induce feelings of guilt which could disengage people from the message.

"It's also a guilt trip because if, by accident, obviously you're not intending to food poison your family, if they did, the onus in this message is you're responsible if you don't cook this meat through and make sure it's cooked through." (55+ years old, Northern Ireland)

Response to this approach amongst these older/ more experienced participants may have been influenced by their reaction to the behaviours cited in the messages. Where suggested behaviours were considered 'common sense' (for example "always follow instructions on cooking times and temperatures" in Stimulus 1), participants felt that they did not personally need to be told this information; this may have reinforced the patronising feel of some messages.

Use of images

Images that depicted families/ children involved in food preparation (children near an oven hob in Stimulus 1 and children near an open BBQ in Stimulus 9) were met with mixed response. Participants from across the research, and particularly older participants, found images of families cooking together or children in the kitchen concerning and noted that they did not often cook with children. They felt that these contradicted the overall message of keeping families safe.

"I can't tell if the child is about to cook or whether they are putting their hands in the boiling water." (55+ years old, Northern Ireland)

However, these images prompted some participants to think about children learning food safety behaviours from parents. These participants liked the general sentiment that families were passing down good food safety behaviours to their children,

as many participants recounted learning similar messages and behaviours from their own family members when growing up. Passing on good habits was also identified as a motivating factor in previous FSA research[28], particularly among older participants who saw their role as 'educators' in their families.

There was mixed reaction to the image showing friends cooking together in Stimulus 7. Some did not relate to this image noting that they did not typically cook with friends or found cooking with other people a stressful experience.

"I'm always more stressed out cooking with other people. If I'm cooking on my own, it's more of a joy than a shared concoction." (25-54 years old, no children under 18 years old at home, South Wales)

However, the image of spending time with friends appealed to some, who felt that it created a friendly feel to the message. This was particularly noted by participants who enjoyed seeing an image of friends together, noting that they were missing this during the pandemic.

"I like this one because it doesn't seem like it's telling you off. People are going to be spending more time with friends and family. It comes across as a friendly reminder." (18+ years old, Black Caribbean, South East England)

Overall, participants suggested that images showing family or friends enjoying food together (for example, sitting down for a meal) rather than preparing food would better relate to their experiences.

Food safety in different environments and situations

This section of the report brings together participant responses to stimulus materials designed to describe difference scenarios where people should be especially mindful of food safety.

[28] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 54.

Participants noted the timeliness of messages relating to picnics and BBQs with warmer weather approaching and people wanting to eat outside with their friends. Across the research, reaction to these messages were shaped by:

- Perceived risk
- Personal resonance of scenario
- Use of images

Perceived risk

Participants spontaneously noted that they would be more mindful of food safety and the risk of food poisoning when cooking for others. This included cooking for guests, especially more vulnerable people such as young children and elderly relatives (this was particularly noted by younger, less experienced participants), and ensuring that meat was cooked through.

Preparing and cooking for other people was recognised as relevant to both picnics and BBQs. However, as discussed earlier, a social/ duty of care approach did not resonate strongly across all participants. This was most motivating for participants who did not have children of their own but could relate to having picnics with younger relatives and noted that they would be extra cautious on these occasions.

"As soon as you bring family into it, people really stop and think about how they're cooking their food and they're not cooking to how they like it, they're cooking so it's safe for everybody." (18-24 years old, South East England)

Personal resonance of scenario: BBQs

Participants across the research acknowledged that BBQs were situations where people could more easily contract food poisoning from eating undercooked meats – even among older participants with more cooking experience. The perceived high risk of food poisoning at BBQs was also cited in previous FSA research[29]. Many

[29] Consumer Insight Research: Messaging for Food Safety Communications (2014), TNS BMRB, Slide 37.

participants, especially those in older groups, spoke about already being very conscious and careful when storing and cooking meat at BBQs with some people pre-cooking meats first in the oven (particularly seen amongst Black Caribbean participants), or cooking meats for longer even after the juices were running clear.

"When I have a barbeque, it's probably the worst thing I worry about: Is it cooked thoroughly? I would never put chicken on a barbeque…It's a real high-risk. I always part-cook them in the oven." (25-54 years old, no children under 18 years old at home, South Wales)

Those who were younger and/ or had experienced food poisoning before typically found this message helpful and informative.

"I didn't know half of the stuff that we're talking about. Now I can think back to this conversation tonight, and check is the juice running clear?... I'm doing a barbecue this summer. This statement makes me think I need to be wary… I would think, 'Let's be careful there'." (25-54 years old, no children under 18 years old at home, North England)

Personal resonance of scenario: picnics

Participants did not spontaneously cite picnics as a situation when they were particularly mindful of the risks of food poisoning and it did not emerge as an activity that participants generally took part in regularly. With this in mind, participants often recalled other instances where they transported food outside of the home (for example, packed lunches for school and work).

"For me it's about if I took my food to work, I'd leave it in the car all day and still eat it, so maybe putting it in the fridge." (25-54 years old, no children under 18 years old at home, North Wales)

Participants described different strategies for transporting food including cool boxes, cool bags and ice-blocks. However, younger participants in particular admitted that they did not think about food safety when transporting food noting that they would use shopping bags or a backpack. These participants were most likely to positively receive advice to keep foods below 5°C perhaps reflecting that they did not currently consider the temperature of food when transporting it.

“I wouldn’t have thought of keeping picnics in cool boxes. People in pictures carry little baskets and they’re not cool, are they, so I wouldn’t have thought of using a cool box.” (18-24 years old, North Wales)

Use of images

Participants did not relate to the picnic images shown in Stimulus 8 as they were not considered to show realistic images of picnics. There were suggestions for images to show more traditional picnic foods such as sandwiches, sausage rolls and crisps.

As discussed earlier the image showing a father and child cooking over a BBQ (in Stimulus 9) received a mixed reception with some participants commenting on how they felt it was dangerous to have a child standing close to a BBQ, whilst others related to the idea of parents passing down good cooking habits.

Participants felt that any images used could encourage participants to think about wider situations when the desired behaviours described in the messages could be applicable. For example, showing cooking of meat of grills in the home or transporting food for other occasions such as packed lunches.

Chapter 5: Views towards channels and messengers

Current sources of information

Participants cited a range of places where they had previously come across information regarding food safety.

Formal education/ training had been received at school and by those who had previously worked in a role where they had been required to attend hygiene training for example, supermarket, café, hospital, school). Information learned in these environments had shaped food related behaviours at home and were recalled many years later.

"A lot of lessons came from home economics in school. That was informative on where to store things." (55+ years old, Northern Ireland)

Behaviours had also been learned from family members, often through watching how parents had managed food. Younger participants noted that they would ask parents for advice on food safety. Family and friends who worked in the food industry had often shared tips for handling food for example, using different coloured chopping boards. In some instances, participants recalled debating behaviours (for example, use of best before dates or washing chicken) with family or friends.

Participants noted that they came across food related information when looking for cooking inspiration or recipes (for example recipe books, BBC online, YouTube). In a few instances, participants (particularly younger) noted that they came across relevant information and food hacks (for example, how to cut an onion) on social media, for example Mrs Hinch, Wean in 15, What Mummy Makes.

Television cookery programmes and food-related documentaries were also considered a source of information. Cookery programmes featuring celebrity chefs (Gordon Ramsey, Jamie Oliver, James Martin) as well as competitions (MasterChef, The Great British Bake-off) were mentioned, with advice from professionals often trusted.

“You think they [celebrity chefs] know what they’re talking about. When you hear it from a professional, you take it even more than your family. If they’re on TV, they don’t want to make you ill." (18-24 years old, South Wales)

Television documentaries were less likely to be mentioned by younger participants and specific names of these were not recalled. They typically provided tips and information for avoiding food waste, keeping food fresh and how to store food.

Public information campaigns were often recalled by older participants with mentions of adverts regarding cooking meat at BBQs, hand washing, defrosting, and washing chicken/ turkey (in Northern Ireland). Participants also recalled adverts that used ultra-violet lighting to show bacteria.

Food packaging was mentioned as a source of information, for example, how to store foods. One participant noted that they asked their butcher for guidance on storing meat.

Suggested sources of information and messengers

Across this research, participants were asked where they would expect and find it useful to see the types of messages presented in the stimulus materials shared and who they would trust to provide this. Reponses typically reflected their current sources of information.

Family emerged as a key trusted source for advice and guidance about food safety, with some participants noting that they felt they had a responsibility to educate their children.

“It’s down to us to educate our own children, not just the government and schools. If you're cooking with kids at home, you’re educating them.” (25-54 years old, have children under 18 currently living at home, South Wales)

More formal education was also considered an important way to promote food safety with participants noting that schools had personally been a key source of information and felt that young people should be learning about food safety as a life skill at school and more broadly. In-school campaigns were also suggested as a way to target young people.

Participants reflected on the types of places that they interacted with food in everyday life, and these were suggested as places where it would be helpful and relevant to provide food safety information. These included supermarkets (physical and online), takeaway shops, butchers, university kitchens and workplaces. Whilst participants did not cite which specific messages would be most useful in each of these environments, some felt that detailing the consequences of food poisoning could be off-putting in places selling or serving food.

Many felt that supermarkets had a responsibility for their customers and expected that the messages they provided could be trusted. However, there was some scepticism held around this (for example, with mentions of the horsemeat scandal). These participants felt that information coming from a trusted source such as the FSA but displayed in supermarkets would be most appropriate.

Participants felt that there was also a role for other parts of the food industry in providing consumer guidance. This included suggestions for information provision from fridge and food equipment manufacturers (for example, information on cool boxes).

Information on food packaging was noted as something that would generally be trusted although there was less certainty about how much attention people would pay if this became too detailed.

“On packages. Especially poultry. A bit more in your face. How to store it and cook it to make sure it’s cooked properly. You could have it like it’s hazardous. Important, please read. That sort of thing.” (55+ years old, Midlands)

Those that used recipe boxes (for example, Hello Fresh) suggested that information could be provided within these. One participant suggested including information on Olio (a food sharing app).

Participants further suggested that food safety information could be provided where people came across health-related information. Suggestions included GP surgeries, hospitals and baby clinics with participants reflecting that they would trust information from the NHS.

Science-based information shown in the stimulus materials was broadly received positively, with some calls for more facts to be included to support messages. However, scientists were not spontaneously suggested as communicators of food safety messages and on probing, there were mixed views towards information coming from this source. Participants reflected that they had heard from scientists during the pandemic and felt that public engagement with this type of role had therefore recently changed. Whilst some suggested that this could make scientists a credible source of information, others noted that scientists could have differing points of views on issues and therefore queried how reliable any information provided might be. There were also questions regarding the link between the work and expertise of scientists and food safety behaviours.

"[I] don't think it's up to scientists to tell you how to cook a burger, is it?" (55+ years old, Midlands)

Celebrity chefs were generally deemed a credible source of information and considered experts in food storage and preparation. Participants further expected them to be able to communicate in a way that would be clear and engaging and reinforce good food safety practices. Gordon Ramsey and Jamie Oliver were frequently suggested with further individual mentions of celebrities such as Lorraine Pascal, Kylie Kwong, Nancy Kwan, Nadiya Hussein, Delia Smith and Mary Berry. A couple of participants also suggested well-known nutritionists or people with a medical background, for example the Food Medic or influencers that shared food related content like recipes. Participants reflected that they would be unlikely to trust celebrities who were not from a food background or industry.

While noting that participants had been 'primed' through their participation in the research (for example, were provided with an information sheet detailing the research was being carried out on behalf of the FSA), there appeared to be general agreement that a body with responsibility for food standards would be deemed appropriate to communicate such measures. The FSA was not always spontaneously mentioned by participants, and there was limited knowledge across participants regarding the role of the FSA. However, they felt that an independent organisation responsible for food safety would be trustworthy.

This echoes the FSA Risk Communication Toolkit[30], which notes that independent organisations like the FSA are considered credible.

"Because [if] it's coming from someone in authority who knows what they're talking about. You're more likely to accept it as fact. " (55+ years old, Northern Ireland)

Participants suggested a range of channels that could work well for providing food safety information. Across the research older participants in particular suggested leaflets, posters (on billboards, at bus stops, on trains, in GP surgeries) adverts in magazines and on the radio. Television adverts were suggested across participants whilst others suggested social media advertising across a range of platforms including YouTube, Facebook, and - particularly amongst younger participants - Instagram and TikTok. The FSA Risk Communication Toolkit[31] provides guidance for using these different channels.

[30] The FSA Risk Communication Toolkit V2 (August 2020), 2CV, Page 8.
[31] The FSA Risk Communication Toolkit V2 (August 2020), 2CV, Page 7.

Chapter 6: Summary and conclusions

This research aimed to explore current behavioural drivers when it comes to communicating food safety messages to the public, and how that might vary between audiences. Below we describe the key conclusions from the qualitative research, reflecting on the COM-B components of **capability**, **motivation** and **opportunity**, to support further thinking about supporting public behaviour change.

In general, food safety in the home was something participants readily engaged with. They recognised the importance of people handling and preparing food safely. As would be expected, personal attitudes and individual experiences around food **varied considerably**. Similarly, there were clear differences in the extent to which risks around preparing, handling and storing food were something participants thought about.

How **confident** participants felt about cooking was therefore an important driver of views of food safety and of the different approaches tested during the research. This confidence was most strongly linked to personal experience of cooking and therefore tended to increase with age (although this was not always the case). The COM-B framework highlights the importance of building the **capability** of individuals, to help ensure they are psychologically and physically able to carry out the desired behaviour. This research found that reaction to communications that seek to build this capacity was strongly influenced by existing feelings of confidence. This confidence may also impact attitudes towards risk of food behaviours; where risks are perceived to be low, 'risk' is unlikely to act as a **motivation** to change.

Many participants felt comfortable preparing, cooking and storing food and were not worried about food safety risks caused by them personally. Those with **greater confidence** already felt that their behaviour kept them and others safe, usually on the basis that they had not experienced problems in the past. These participants were best engaged through a combination of scientific information about food safety that struck them as new or different, alongside a clear explanation of how they should act as a result. Importantly, this new information and the associated behaviour had to seem credible to them based on what they already knew.

As might be expected, participants with **lower confidence** typically had more questions about food safety. Many – but not all – were open to learning more about handling and preparing food. They wanted reassurance about the basics of food safety linked to simple and achievable steps they could take to keep themselves and others safe.

Other participants did not necessarily lack experience preparing food but were **much more concerned about food safety**. This was often because they had previous experience of food poisoning personally or from friends and family, or because they felt anxious about germs in general. They described increased anxiety based on approaches designed to provoke a strong emotional response, particularly in terms of visuals. Existing concerns regarding food poisoning or generally anxiety towards germs can provide a **motivational** reason for adopting food safe behaviours but the research demonstrates that any communications need to carefully consider those with these experiences.

The findings also suggest that there are **cultural differences** when it comes to food safety practices, although it was beyond the scope of this research to explore these in detail. In particular, participants from ethnic minority backgrounds recognised and discussed specific behaviours they described as being different from those generally recommended. **Motivations** to carry out these behaviours are so strongly grounded in the experiences of family and the wider community and have been practised across generations without adverse consequences. Therefore, questioning these behaviours could result in queries regarding the credibility of food safety messaging.

The clarity and credibility of food safety messages was important. Providing clear rationale for food safe behaviours, practical and easy guidance and referencing scientific terms and information can all help to engage people. The channel and messengers providing the information can also support the credibility of the message, with trust in the messenger playing a key role. The research suggests that where communications are clear and credible, they can help build awareness and **capability** amongst people to carry out desired behaviours.

The findings show that personal resonance is crucial when identifying an **opportunity** to communicate about safe food behaviours. Scenarios portrayed in communications need to be easy to relate to.

Communications that sought to evoke an emotional response to **motivate** change were met with mixed response suggesting that use of this type of approach should be treated with caution.

Finally, the **interaction between the COM-B components of capability, motivation and opportunity is complex.** This emphasises the importance of testing specific communications with the public to explore reactions in detail.

These findings have been used to develop the FSA Food Safety Communications toolkit which provides key principles and guidance for developing future food safety communications.

Annex

Annex A: Detailed methodology

The first stage of the project was a rapid scoping stage of existing research on the topic of food safety behaviours and communication testing. Nine previous studies were reviewed (see bibliography in Annex C below) and findings distilled and presented in a workshop discussion with the FSA and Ipsos MORI to confirm the final approaches to test.to engaging the public on food safety messaging to be tested in qualitative research sessions. The four main approaches were: awareness-raising, generating an emotional response, highlighting the social aspect of food, and food safety in different environments. Messages across the 4Cs were identified and mapped across these approaches and 10 stimuli were developed with supporting images from iStock to help generate a discussion around the messages.

Fieldwork was conducted between 23rd February and 29th March 2021 across England, Wales and Northern Ireland. Participants either took part in a two-hour long video-enabled focus group on Zoom with one moderator and another researcher providing technical support, or a one-hour long telephone depth interview. Depth interviews were conducted to ensure participants who were less confident online were included in the research.

In 20 of the focus groups, participants from the general population were stratified by age and life-stage across England, Wales and Northern Ireland. Participants were stratified into the following groups:

- 18-24 years old
- 25-54 years old with children living at home
- 25-54 years old without children living at home
- 55+ years

Across these general public groups, participants were recruited to represent a mix of genders, ages and socio-economic group, with at least x10 participants in a caring role (i.e. looking after elderly parents) and at least x10 from an ethnic minority background. All participants were recruited to have some involvement with food preparation.

In the remaining 10 focus groups, participants formed two groups each of Chinese, Black African, Black Caribbean, Pakistani and Indian minority communities.

In all x30 groups, six participants were recruited. Research sessions were structured to include a ‘warm up phase’ where participants discussed typical cooking behaviours and spontaneous views towards food safety. They were then shown up to six pieces of stimulus materials, designed to test potential approaches to communicating food safety. Participants were also asked their views towards potential channels and messengers for food safety messages. The discussion guide is provided in annex D.

The 10 stimuli were rotated across the groups and depths, with depth participants only shown four stimuli, again rotated across the x20 interviews. Focus group participants were shown the stimuli during the discussion group with the moderator sharing their screen. Depth interview participants received the printed stimuli ahead of their scheduled interview in a research interview pack and were instructed not to look at these ahead of the interview, to capture immediate responses and reactions to the stimulus.

Annex B: Achieved sample

General public groups: 6 people recruited to each

Age/ life-stage	Number of groups: England	Number of groups: Wales	Number of groups: Northern Ireland
18-24 years	2	2	2
25-54 years with children living at home	2	1	1
25-54 years without children living at home	2	2	1
55+ years	2	1	2

Total: 20

General public group participants were recruited to all have some involvement with food preparation, and to have the following characteristics:

- A mix of genders: 3x male and 3x female within all groups
- Spread of ages within groups
- Mix of SEG in each group (at least 2x ABC1 and 2 x C2DE)
- At least 10x participants from an ethnic minority background across the groups
- At least 10x participants with a caring role across the groups

Ethnic minority groups: 6 people recruited to each

Ethnicity	England	Wales
Indian	1	1
Pakistani	2	-
Chinese	2	-
Black African	1	1
Black Caribbean	2	-

Total: 10

Depth interviews:

Participant type	England	Wales	Northern Ireland
70+	2	1	1
With a disability of health condition	2	3	1
With caring responsibilities	1	1	3
First generation participants from an ethnic minority background	5	-	-

Total: 20

Annex C: Desk review bibliography

University of Hertfordshire and Food Standards Agency (2013) Domestic Kitchen Practices: Findings from the 'Kitchen Life' study

TNS BMRB (2014) Consumer Insight Research: Messaging for Food Safety Communications.

TNS BMRB (2015) Food Hygiene Practices and Attitudes among BME groups,

Food Standards Agency and NatCen (2018) The Food and You Survey - Wave 5 Combined Report.

Madano, ZK Analytics and the Food Standards Agency (2019) Food safety segment profiles

Food Standards Agency/Social and Local (2020) FSA Christmas Campaign 2019: EVALUATION

Food Standards Agency, Ipsos MORI and Bright Harbour (2020) The COVID-19 consumer research

Bright Harbour (2020) The Lived Experience of Food Insecurity During Covid-19

Bright Harbour (2020) Consumers and the Food System Under Covid-19

Annex D: Discussion guide

Research Objectives

- Explore potential communication approaches for engaging the general public in good food safety and hygiene practices.
- Understand which communication approaches are most motivating and effective
- Understand which communication approaches have more/ less appeal for different groups including:
    - Any differences across BAME communities
    - Any differences across the Nations
- Explore potential risks and opportunities for different communication approaches
- Explore views towards communications focusing on:
    - Specific food preparation behaviours relating to the 4 Cs
    - Specific, 'non-typical' food consumption occasions (for example BBQs, picnics, hosting large numbers)
- Gather insights regarding preferences for channel and messenger

Note: this discussion guide is intended to inform the discussion in each focus group. Questions may not be asked in the order below, and not every question will be asked in each focus group or depth interview.

Moderator note: The key purpose of the group is to understand reactions to a range of **approaches**. The key focus should be on understanding reaction to these and the extent to which participants relate to them. Reflect participant language in the discussion and fully explore how messages should be presented.

Groups and depths:

The following discussion guide covers both groups and depths. Please note:

- Different timings for group and depth sessions.
- Different instructions for sharing approaches with participants for groups and depths.

- For **groups** please use stimulus materials to show participants, as well as reading out the statements on each piece of stimulus.

Section 1 : Introductions

Groups : 15 mins, Depths: 10 mins

Moderator introduction:

- Thank participant for taking part.
- Introduce self and Ipsos MORI.
- Explain purpose of the discussion:
- This research is being carried out on behalf of the Food Standards Agency. They are interested in understanding more about people's experiences with food, how they buy, prepare and store it. They specifically are interested in your views around different messages and information about food preparation, which I'll be sharing with you during the group.
- Discussion will last 2 hours. Interviews will last 1 hour.
- We will be audio-recording recording this discussion in line with MRS Code of Conduct. The recording will be stored on our secure servers and no one outside of the research team will have access to this.
- Following these groups/interviews, we will be writing up our findings into a report for the FSA which will be published. However, no findings will be attributed to you and we will not include your name in any reports.
- Any questions?
- Ask if everyone is happy for the recording to begin.
- Turn on recording and record consent that everyone is happy to participate in the interview, that they understand the aims of the research, that their participation is voluntary and that their responses will remain confidential and anonymous.

Participant introduction:

- First name, family or work life
- In a typical week, what kinds of cooking do you do? Who, if anyone, do you cook for?
- What is your favourite meal to cook?

Section 2: Spontaneous discussion of food safety measures

Groups: 20 mins, Depths: 10 mins

Exercise: Word Association

I'd like to start by asking you what comes to mind when I say 'food safety at home?

- *Spontaneous then prompt:*
- What does food safety mean to you?
- What types of things do you think about when:
    - Storing food?
    - Preparing and cooking food safely at home?
    - Chilling/freezing and reheating food?

- In what types of situations do you tend to think about food safety?
    - When might you think about it more?
    - When might you think about it less?

I'd now like to talk about some different aspects of preparing, cooking and storing food at home, and the types of things you might think about when it comes to staying safe from food poisoning. Just to remind you that there are no right or wrong answers.

Moderator: the aim of this section is to explore what is top of mind for participants when thinking about different aspects of the 4Cs:

For each of the above please explore:

- What types of things do you do around this? Why?
- To what extent do you feel confident about doing this and knowing what to do, and why?
- What are you less certain of/ do you have questions about?

Prompts if needed: What comes to mind when you think of…

  - **Cleaning surfaces** and staying safe from food poisoning?
  - **Cleaning raw foods** and staying safe from food poisoning?
  - **Cooking times and temperatures** and staying safe from food poisoning?
  - **Cross-contamination between raw and ready to eat cooked foods** and staying safe from food poisoning?
  - **Chilling and freezing food** and staying safe from food poisoning?

- Which of these behaviours that we've just discussed do you see as more important? Why?
- Have you ever made a change to the way you handle, prepare cook or store food based on **advice** you have received?
  - Who provided this advice? ***(Moderator instructions: If family members, explore who and the broader context, i.e. their age)***
  - Why did you listen to them and make the change?
  - When have you been given advice that you didn't follow? Who gave you this advice? Why didn't you follow it?
- Have you ever made a change to the way you handle, prepare, cook or store food based on some **information** that you have seen?
  - Where did you see this information?
  - Why did you listen to this and make the change?
  - When you have seen information that you didn't follow? Who provided this information? Why didn't you follow it?

Section 3: Testing the approaches

Groups: 50 mins, plus 5-minute break, Depths: 25 mins

I'd now like to show you some different statements about staying safe from food poisoning. I'm interested to know what you think about them…

Approaches to be rotated across groups. Please see Stimulus for each approach.

Moderator instructions: To explain to participants that these aren't necessarily the images that will be used, so feedback on these is helpful as well.

General prompts for all approaches shown:

- What do you think about this statement?
- How does it make you feel? Why?
- What is it trying to say?
- Is there anything about it that stands out for you?
- What do you like/ dislike about it? Why?
- What do you think about the words and phrases used? Any that you particularly like/ dislike?
- Is anything in the statement that is unclear or doesn't make sense?
- Who is it aimed at?
- What do you think about the tone of the statement (scientific, factual etc.) what type of tone works best?
- What do you see as most important? The message or the image?
- What here is helpful to you? Is there anything that is not helpful?
- If anything is not helpful: How could this message be changed to be more helpful for you?
- Would this statement encourage you to change, or think about your behaviour differently?
- How could this statement be improved to better catch your attention?

Overall

Stimulus: Overall slide showing all statements explored.

Which of the statements we've looked at stick in your mind? Why?

Looking at all of the different statements we have looked at…

- Which ones stand out to you the most? Why?
- Which do you like the most? Why?
    - How could they be improved/ made even better?
- Which do you like the least? Why?
    - What would you change to make them more appealing to you?
- Which do you think would encourage you to think about what you do at home? Why?

Section 4: Channels, messengers and trust

Groups: 20 mins, Depths: 10 mins

- Who would you expect to be providing you with information about food safety, like the statements we've just been looking at?
- Who would you trust to provide you with this information?
    - *Spontaneous then prompt - for each, ask participants for suggestions of people:*
    - Supermarkets?
    - A health body (for example the FSA/NHS/PHE/Local council website?)
    - Scientists?
    - Celebrity and who?
    - Everyday person/someone you know? (**Moderator instructions:** If family members, explore who and the broader context, i.e. their age)
    - Other?
- Who would be most likely to encourage you to listen to the statement?
- Where would you ***like*** to see this type of information? Where would this be helpful for you?
    - *Spontaneous then prompt:*

    - Online - where, which sites?
    - Social media - which?
    - Supermarkets
    - Magazines
    - Other?
- Is there anything you have learnt today which might make you change your food preparation practices at home?
    - If so, what was it about the message that made you think about this differently?

Section 5: Wrap-up

Groups: 10 mins, Depths: 5 mins

- Finally, thinking about everything we've discussed today, what recommendation would you give to the Food Standards Agency around how they encourage people to think about food safety, and staying safe from food poisoning at home?
- Is there anything else you would like to mention about food safety at home that we have not covered?
- Thank you for your time today, the findings from our research will be written up into a report for the Food Standards Agency. They will use these findings to help decide how to communicate to people about food safety in the future. These will be published but your name will not be included in any reports we write.

Signposting Stimulus (slide of some contact details for FSA/ other organisations that provide information about food safety)

- If anyone has any questions about food safety at home, you can contact these places. I'm going to leave this slide up, so you can take a note of their names and contact details if of interest. Please let me know if you would like me to send you a copy of this.

Thank and Close

Annex E: Stimulus material

Stimulus 1

ST1

You can help keep your family and loved ones safe.

Always follow instructions on cooking times and temperatures.

1

Stimulus 2

ST2

Remembering to wash fruit and vegetables helps remove bacteria like E.coli.

E.coli can produce toxins that can lead to serious conditions, like kidney failure.

2

Stimulus 3

ST3

By checking that your fridge temperature is 5°C or below, you can stop harmful bacteria growing and keep food fresher for longer.

3

Stimulus 4

ST4

Your chopping board might look safe, but is it?

Using the same chopping board for raw and cooked food could make you seriously ill.

4

Stimulus 5

ST5

Dangerous bacteria, like listeria, can grow each time food is cooled, stored, and reheated.

This can cause fever, muscle aches, nausea or diarrhoea and can spread to the nervous system.

Only reheat food once.

5

Stimulus 6

ST6

Store and prepare raw and cooked foods separately.

You won't be able to see cross-contamination of bacteria, but this can still cause food poisoning and make you very ill.

6

Stimulus 7

ST7

Feast with friends safely by cooking food properly.

Food needs to be cooked at 70°C for two minutes to kill bacteria.

7

Stimulus 8

ST8

Always store picnic food in cool boxes kept below 5°C.

Dangerous bacteria will grow when food is too warm.

8

Stimulus 9

ST9

Protect your family's health by making sure meat like pork, poultry and minced meat (like burgers) are always cooked through, and the juice runs clear when cut.

9

Stimulus 10

ST10

You can keep your family safe from food poisoning by only reheating leftover food once.

Always check that reheated food is steaming hot all the way through.

10

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