

The 2014

F O O D and Y O U

Survey

Northern Ireland Bulletin 2
Food safety in the home

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Food safety in the home

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Official Statistics

The statistics presented in this bulletin meet the requirements of the UK Code of Practice for Official Statistics.¹

Further information on Official Statistics can be found on the UK Statistics Authority website².

¹ <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

² <http://www.statisticsauthority.gov.uk/national-statistician/types-of-official-statistics/index.html>

Foreword

This bulletin presents a descriptive overview of selected findings from Wave 3 of the Food and You survey for Northern Ireland, commissioned by the Food Standards Agency (FSA or the Agency). Much of the Agency's work with the public is concerned with informing and influencing the ways in which food is purchased, stored, prepared and consumed. Food and You provides data about the prevalence of different reported behaviours, attitudes and knowledge relating to these topics.

Waves 1 and 2 of the Food and You survey were carried out in 2010 and 2012 respectively. Wave 3 was conducted in 2014 and consisted of 3,453 interviews from a representative sample of adults aged 16 and over across the UK, including 524 interviews in Northern Ireland on which this report is based. Wave 3 builds on and extends the previous findings.

The key findings for Northern Ireland from Wave 3 have been published in six separate bulletins, one for each of the following main topics:

- Eating, cooking and shopping
- Food safety in the home
- Eating outside the home
- Experience of food poisoning and attitudes towards food safety and food production
- Advice on healthy eating
- Eating and Health

In addition to the bulletins, an executive summary has been published which presents key findings for Northern Ireland from across the entire survey.

This bulletin provides a descriptive overview of the key findings from Wave 3 in relation to food safety in the home.

Background and objectives

Role of the FSA

The FSA was created in 2000 as a non-ministerial, independent government department governed by a Board whose members have extensive knowledge and experience in a wide range of sectors relevant to the FSA. The Agency was set up to protect public health from risks which may arise in connection with the consumption of food, and otherwise to protect the interests of consumers in relation to food.

The FSA is responsible for food safety and hygiene across the UK, and is committed to ensuring the general public can have trust and confidence in the food they buy and eat. In Northern Ireland the FSA is additionally responsible for nutrition policy and food labelling.

In providing guidance on food safety to consumers, the Agency aims to minimise the risk of food poisoning. Advice generally relates to four aspects of food hygiene: cleaning, cooking, avoiding cross-contamination and chilling (collectively known as the '4 Cs'), with advice provided on each aspect. Guidance is also given on the use of date labels (such as 'use by' and 'best before' dates) and storage instructions on foods to help ensure the safety of food eaten at home.

The Food and You survey

In 2009, the FSA commissioned a consortium comprising TNS BMRB, the Policy Studies Institute (PSI) and the University of Westminster to carry out Wave 1 of Food and You. The main aim of this survey was to collect quantitative information as a baseline on the UK public's reported behaviour, attitudes and knowledge relating to food issues (such as food safety and healthy eating). The results from this survey provided an extensive evidence base to support policy making at the FSA and across other government departments.

Waves 1 and 2 of the Food and You survey were conducted by the same consortium in 2010 and 2012 respectively. Reports of the findings and methodological details are available on the FSA website³. Specific examples of use of the findings include results from Wave 1 being used to determine the theme of the 2012 FSA Food Safety Week⁴ and findings from Wave 2 informing FSA public campaigns on food safety. Secondary analysis of the Waves 1 and 2 data has explored domestic food safety practices⁵ and the relationships between nutrition and food safety⁶. Wave 3 was carried out in 2014 by TNS BMRB.

Prior to 2010, the FSA was responsible for food safety and nutrition policy across the UK. Accordingly, Wave 1 of the Food and You survey contained questions covering both healthy eating and food safety, and the findings were reported together. During Wave 1, responsibility for nutrition policy (healthy eating) was transferred in England and Wales to the Department of Health (DH) and the Welsh Government respectively. Nutrition policy in Northern Ireland and Scotland remains the responsibility of the Agency. Waves 2 and 3, therefore, included a question module on healthy eating for respondents in Northern Ireland and Scotland, but focussed solely on food safety issues for respondents in England and Wales.

The objectives for Wave 3 of the Food and You survey were to collect quantitative information to enable the Agency to:

- Explore public understanding of, and engagement with, the Agency's aim of improving food safety
- Identify specific target groups for future interventions (e.g. those most at risk or those among whom FSA policies and initiatives are likely to have the greatest impact)
- Monitor changes over time (compared with data from Waves 1 and 2 or from other sources) in reported attitudes and behaviour
- Broaden the evidence base and develop indicators to assess progress in fulfilling the Agency's strategic plans, aims and targets.

About this bulletin

Self-reported behaviours

Interviews as a data collection method do not necessarily capture people's actual practices. What respondents say in interviews about what they do and think is necessarily *reported* for a number of reasons, including recall not being accurate, certain behaviours being habitual and therefore possibly difficult to recall, and desirability bias – described further below. Here self-reported behaviour is used as a proxy for actual behaviour. Where the report refers to behaviour, attitudes or knowledge, the fact that the data refer to reported behaviour must always be borne in mind.

When developing the Food and You questionnaire, it was apparent that the risk of social desirability bias was high i.e. respondents tended to answer questions based on what they thought they ought to say, rather than reflecting what they actually do, know or think. In particular, there were a number of topics in the questionnaire for which respondents might be reluctant to report behaviour which goes against a generally well known 'best practice' (for example, not washing their hands before cooking or preparing food). The Food and You questionnaire was carefully designed to limit this as far as possible by asking questions about behaviour in specific time periods (e.g. asking whether a respondent did something 'in the last seven days' rather than 'usually') and framing questions in a neutral way.

Questionnaire changes between waves

To reflect the changing responsibilities of the FSA, the focus of the survey content was changed between Wave 1 and Wave 2. To minimise any effects caused by changing the order of the questions

³ The Wave 1 report can be found at: http://www.foodbase.org.uk/admintools/reportdocuments/641-1-1079_Food_and_You_Report_Main_Report_FINAL.pdf and the Wave 2 report can be found at: http://www.foodbase.org.uk/admintools/reportdocuments/805-1-1460_Wave_2_Main_Report.pdf

⁴ <http://www.food.gov.uk/news-updates/campaigns/germwatch/>

⁵ <http://www.food.gov.uk/science/research/ssres/fs409012>

⁶ <http://www.food.gov.uk/science/research/ssres/crosscutss/fs307014>

attempts were made to keep the structure of the questionnaire as similar as possible between the waves. Despite this, the removal of the healthy eating questions in England and Wales, and further revisions of the food safety questions introduced unavoidable differences between the two waves of the survey. As the context in which survey questions are asked is known to influence the way respondents reply we cannot rule out the possibility that differences in responses between Waves 1 and 2 may have been partly or wholly because of changes to the questions. Further changes were made to the questionnaire at Wave 3. Again, whilst efforts were made to keep the structure of the questionnaire as similar as possible to the Wave 2 questionnaire, unavoidable differences were introduced between these two waves of the survey. That observed differences could be an effect of changes to the questionnaire should be kept in mind when considering the findings.

Where questions have remained consistent across the waves of the survey, statistical analysis has been used to determine whether results have changed significantly over time. Although having three data points now means it is possible to see trends starting to emerge, doing so is inevitably still tentative, whereas further waves of data collection would allow greater confidence in identifying trends.

At Wave 1 of the survey, in order to cover additional topics without over-burdening respondents, three question modules (eating arrangements, eating out and shopping patterns) were each asked of a random third of respondents. At Waves 2 and 3, all question modules were asked of all respondents. The larger sample sizes for these modules at Waves 2 and 3 mean that smaller differences observed between Waves 2 and 3 are statistically significant compared with differences between Wave 1 and Waves 2 or 3.

The Food and You Technical Report⁷ provides a summary of questionnaire changes between Wave 2 and Wave 3.

Reporting conventions

Unless stated otherwise, where comparisons are made in the text between different population groups or variables, only those differences found to be statistically significant at the five per cent level are reported. In other words, differences as large as those reported have no more than a five per cent probability of occurring by chance.

Percentages may not add to 100% as a result of rounding.

Topics covered

The Food and You survey collected data on a wide range of topics. As a result it is not feasible for this series of bulletins to present detailed analysis of all of the questions. In particular, only selected socio-demographic variables have been analysed to uncover statistically significant differences. These variables were identified by the FSA as of key interest, providing the most useful information about sub-group variation at this initial stage of data analysis. The identified variables were: age, gender and the Northern Ireland Multiple Deprivation Measure (NIMDM).⁸ Variation by age and gender has been considered across the three waves, while only Wave 3 data was examined for variation by NIMDM. Full data are available in the UK Data Archive⁹ and at data.gov.uk¹⁰ for further analysis.

⁷ <http://www.food.gov.uk/sites/default/files/food-and-you-2014-uk-bulletin-technical-report.pdf>

⁸ The Northern Ireland Multiple Deprivation Measure (NIMDM) 2010 is the official measure of area deprivation in Northern Ireland which considers deprivation across income, employment, health and disability, education skills and training, proximity to services, living environment, and crime and disorder. Areas are grouped into quintiles based on their 2010 NIMDM score, with quintile 1 the most deprived areas across Northern Ireland and quintile 5 the least deprived areas.

⁹ <http://www.data-archive.ac.uk/>

¹⁰ <http://data.gov.uk/>

Key Findings

- Around three-quarters of respondents (77%) reported **cleaning** behaviours in line with recommended practices, saying they always washed their hands before starting to prepare or cook food and after handling raw meat, poultry or fish.
- Around half (49%) of those who reported storing raw meat and poultry in the fridge reported practices in line with those recommended to avoid **cross contamination**. This meant that they reported storing raw meat and poultry separately from ready-to-eat foods and in sealed containers or at the bottom of the fridge. Around four-fifths of respondents (81%) reported keeping certain foods in certain parts of the fridge, and, of these, 85% said this was for reasons of food safety, hygiene, or to stop cross contamination.
- Just under half of respondents (46%) said they always used different chopping boards for different types of food. Fifty per cent of respondents reported that they never washed raw meat or poultry, excluding chicken, and a similar proportion said that they never washed raw chicken specifically (45%).
- In total, 10% of respondents who had a fridge reported behaviour in line with recommended practice for **chilling** (i.e. checking that their fridge temperature is between 0°C and 5°C, at least monthly, using a thermometer). More than half of respondents who had a fridge (53%) reported never checking their fridge temperature.
- The majority of respondents reported always **cooking** food until it is steaming hot throughout (78%) in line with recommended practice. Ninety-three per cent of respondents reported that they never ate chicken or turkey if the meat was pink or had pink or red juices. The majority said they would reheat food no more than once (94%), in line with recommended **reheating** practice.
- Eighty-four per cent of respondents reported that they would eat leftover food within two days of cooking it, in line with recommended practice.

1. Background

With reference to food safety in the home, the FSA is committed to ensuring that consumers better understand how to prepare and store food safely and more consumers follow best practice as a matter of course.

Food preparation in the home is recognised as a critical step in the food chain and the FSA promotes the '4 Cs' principle (Cleanliness, Cooking, Chilling and avoiding Cross Contamination) of good food hygiene which is aimed at preventing cases of domestic foodborne illness thus reducing its incidence:

Principles of good food hygiene – the '4 Cs'

Cleanliness

- Prevent harmful bacteria from spreading by observing good personal hygiene.
- Wash hands after using the loo, after handling raw food, pets, bins, and before touching food which is ready to eat.
- Do not handle or prepare food if you have had a stomach upset, have open sores or cuts on your hands or weeping eye / ear infections.

Cooking

- Cook food thoroughly, especially meat and poultry.
- Make sure food is steaming hot throughout before serving.
- If you reheat food, make sure it is steaming hot throughout and only reheat it once.

Chilling

- Store raw meat in a covered container on the bottom shelf of the fridge, away from ready to eat foods.
- Check your fridge temperature regularly using a thermometer. Fridge temperature should be below 5 degrees Celsius.
- Once opened, food should be kept in the fridge and used within two days, unless the packaging states otherwise.

Avoid Cross Contamination

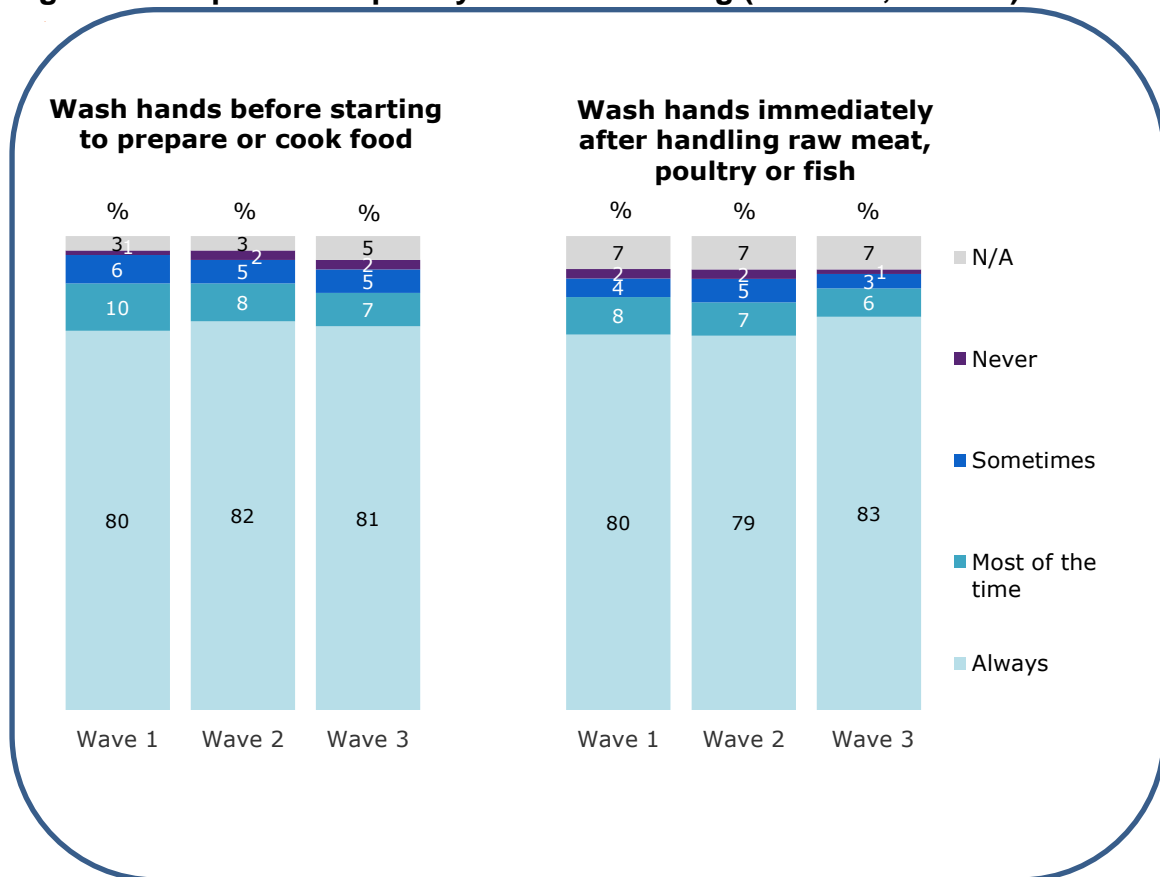
Cross contamination, or the transfer of bacteria from raw foods to ready-to-eat foods, can happen in several ways, including:

- Using the same chopping board to prepare raw and ready-to-eat foods.
- Using the same knife for raw and ready-to-eat food.
- Using the same cloth to clean up raw food spills and ready-to-eat food preparation areas.
- Storing raw and ready-to-eat foods together. Always store ready-to-eat foods above raw foods in the refrigerator.

This bulletin presents the findings relating to each aspect of domestic food safety practice, as well as practices relating to date labelling.

2. Practices relating to the '4 Cs' - Cleaning

Figure 2.1 Reported frequency of hand washing (Waves 1, 2 and 3)



Source: Q4_1 Thinking about when you are storing, preparing and cooking food, I would like you to tell me whether you do or don't do the following things at all when you are in the kitchen and if so how frequently.

Base: All NI respondents – Wave 1 (506); Wave 2 (504); Wave 3 (524)

The FSA recommends that hands should be washed thoroughly on a regular basis and in particular before preparing food, after touching raw food (especially meat), and after using the toilet.

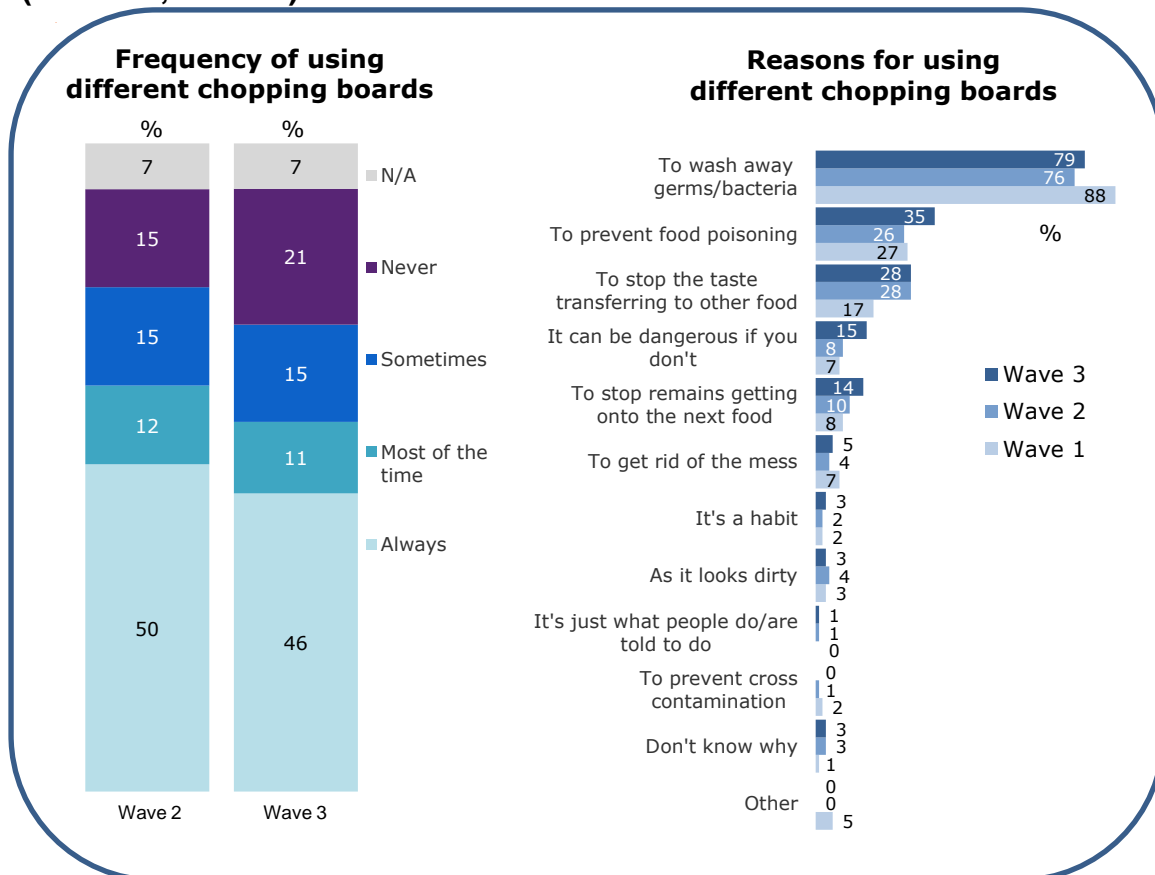
- Overall, 81% of respondents reported always washing their hands before starting to prepare or cook food, and 93% reported that they did this at least some of the time. These proportions were similar to those at Waves 1 and 2.
- The majority of respondents (83%) reported always washing their hands immediately after handling raw meat, poultry or fish, similar to the proportion at Waves 1 and 2.
- Two per cent of respondents said they never washed their hands before preparing or cooking food and one per cent said they never washed their hands immediately after handling raw meat, poultry or fish.

- In total, 77% of respondents reported always washing their hands before starting to prepare or cook food, and always washing their hands after handling raw meat poultry or fish (if they ever did this), in line with FSA recommended practice for cleaning.

3. Practices relating to the '4 Cs' – Avoiding cross-contamination

3.1 Chopping boards

Figure 3.1 Frequency of, and reasons for, using different chopping boards (Waves 1, 2 and 3)



Source: Q4_1 Thinking about when you are storing, preparing and cooking food, I would like you to tell me whether you do or don't do the following things at all when you are in the kitchen and if so how frequently & Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again for other foods or use a clean board. Why do you think they do this?

Note: respondents were able to give multiple reasons in answer to Q4_3;

Note: responses to Q4_3 were given spontaneously, with no prompted response list shown to respondents.

Base: All NI respondents - Wave 1 (506); Wave 2 (504); Wave 3 (524) (Q4_1 not asked at Wave 1)

The FSA recommends using different chopping boards for raw and ready-to-eat foods, or washing thoroughly in between preparing different foods, to avoid cross-contamination.

- Forty-six per cent of respondents said they always used different chopping boards for different foods, whilst 21% said that they never did, similar to Wave 2.
- At Wave 3, 57% of respondents reported using different chopping boards always or most of the time, which was similar to the proportion at Wave 2 (62%).

- As at Wave 2, around four in five respondents (79%) reported that the reason behind washing a chopping board after preparing raw meat, poultry or fish on it, and before using it for other food, was to wash away germs or bacteria, in line with the reasoning which underpins recommended practice, compared with 88% at Wave 1.
- Around a third of respondents (35%) said the reason for washing a chopping board was to prevent food poisoning, compared with 27% at Wave 1 and 26% at Wave 2. This answer is in line with the reasoning underpinning recommended practice.
- The proportion of respondents giving the more general reason that it can be dangerous if you do not use a different board was 15%, compared with seven per cent at Wave 1 and eight per cent at Wave 2.
- Other reasons commonly cited were to stop the taste transferring to other food, (28% at Wave 3 compared with 17% at Wave 1) and to stop remains from getting onto the next food (14% compared with eight per cent at Wave 1). These are not reasons which underpin recommended practice.

3.2 Food storage in the fridge

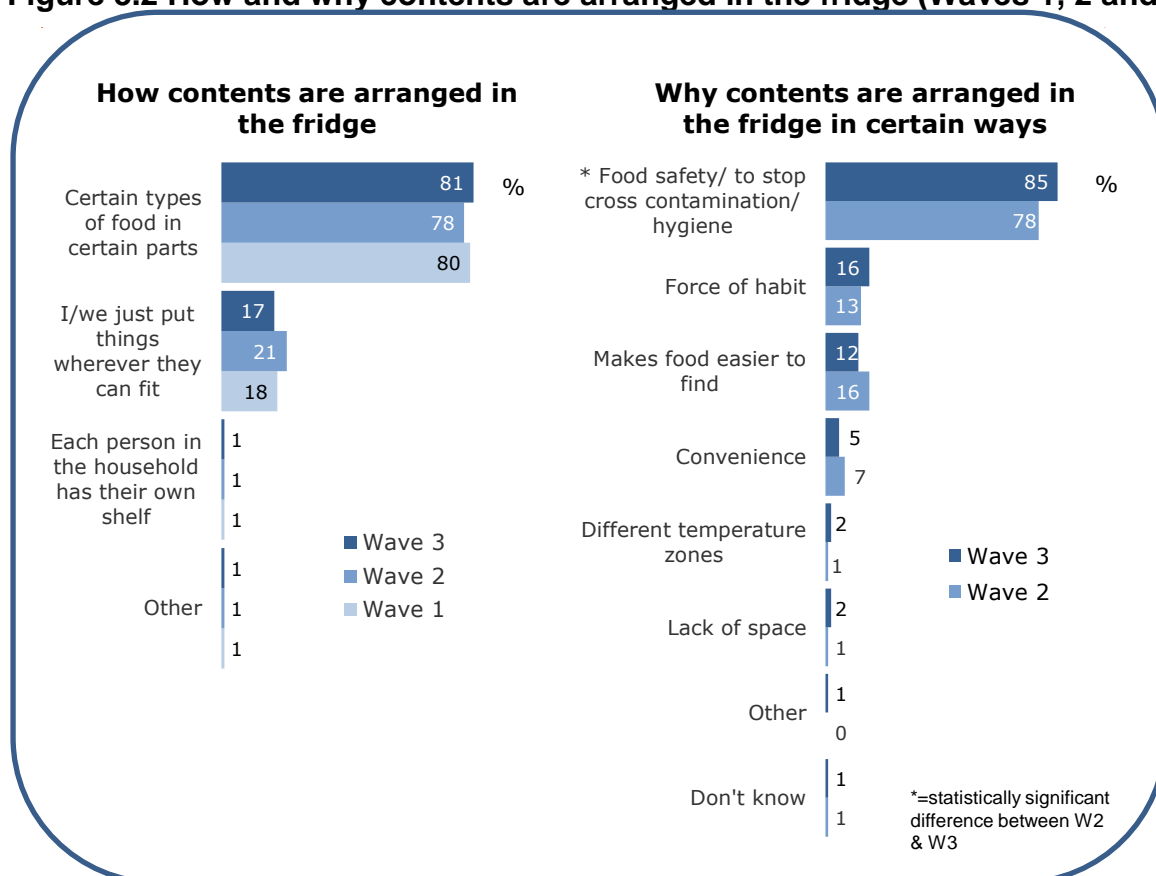
The FSA advises that raw meat should be stored separate from ready-to-eat food and that raw meat and poultry should be stored in sealed containers at the bottom of the fridge, to avoid dripping onto other food.

The image below illustrates the FSA's advice on how food can be safely stored in the fridge¹¹.



¹¹ <http://www.food.gov.uk/northern-ireland/nutritionni/niyoungpeople/survivorform/dontgetsick/chilling#.UQkirh3HGHC>

Figure 3.2 How and why contents are arranged in the fridge (Waves 1, 2 and 3)



Source: Q4_13 And how do you arrange the contents of your fridge? & Q4_13a Why do you always keep certain types of food in certain parts of the fridge?

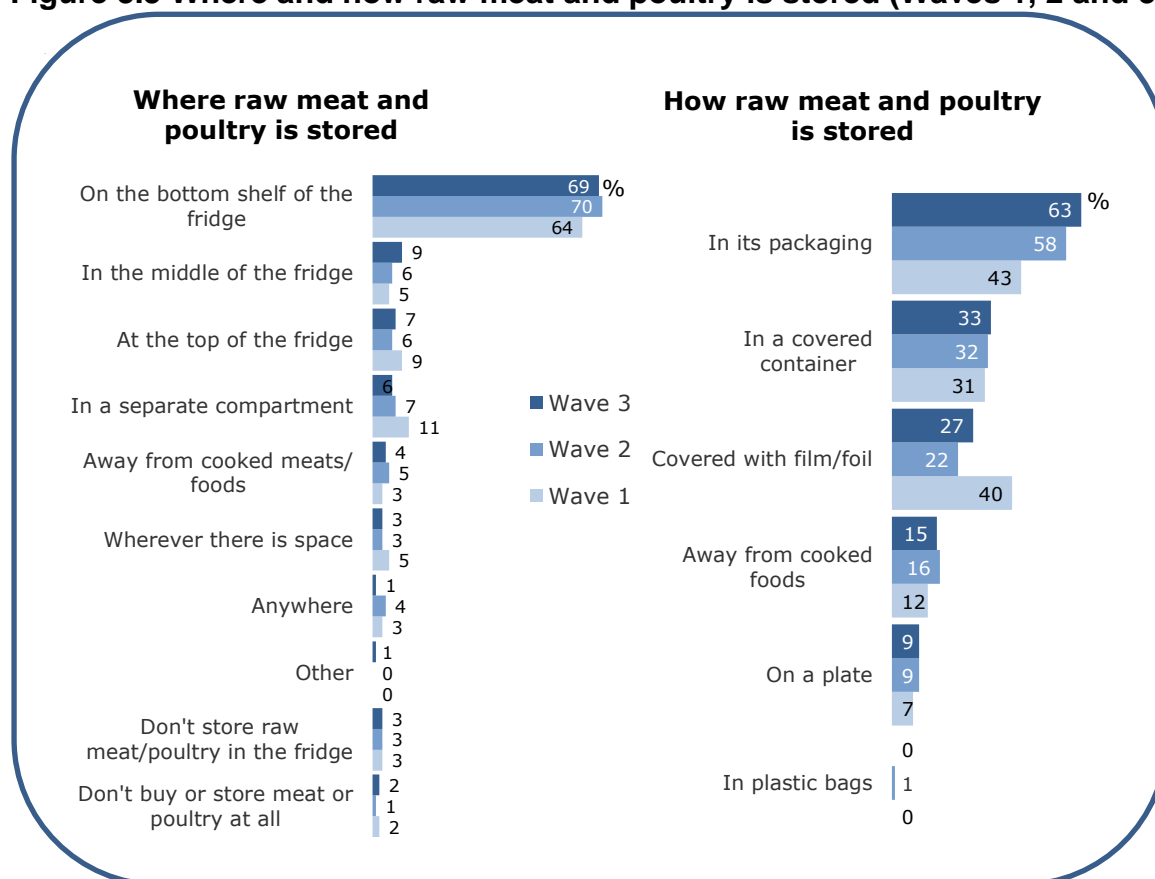
Note: respondents were able to give multiple reasons in answer to Q4_13a

Note: responses to Q4_13a were given spontaneously, with no prompted response list shown to respondents.

Base: Q4_13 All NI respondents - Wave 1 (506); All NI respondents who have a fridge in their household - Wave 2 (494); Wave 3 (518); Q4_13a All NI respondents who always keep certain types of food in certain parts of the fridge Wave 2 (384); Wave 3 (429) (Q4_13a not asked at Wave 1)

- When asked how they arranged the contents of their fridge, around four-fifths (81%) of respondents said they always kept certain types of food in a specific part of the fridge while 17% said they just put things wherever they fit.
- Of those who said they kept certain foods in certain parts of the fridge, 85% said they did so for reasons of food safety, hygiene or to stop cross contamination, compared with 78% at Wave 2.
- Force of habit was cited by 16%, and 12% said they did this because it made food easier to find.

Figure 3.3 Where and how raw meat and poultry is stored (Waves 1, 2 and 3)



Source: Q4_14 Where in the fridge do you store raw meat and poultry? & Q4_15 How do you store raw meat and poultry in the fridge?

Note: respondents were able to give multiple answers

Note: responses to both questions were given spontaneously, with no prompted response list shown to respondents.

Base: Q4_14 All NI respondents - Wave 1 (506); All NI respondents who have a fridge in their household - Wave 2 (494); Wave 3 (518) & Q4_15 NI Respondents who store raw meat and poultry - Wave 1 (478); Wave 2 (473); Wave 3 (489)

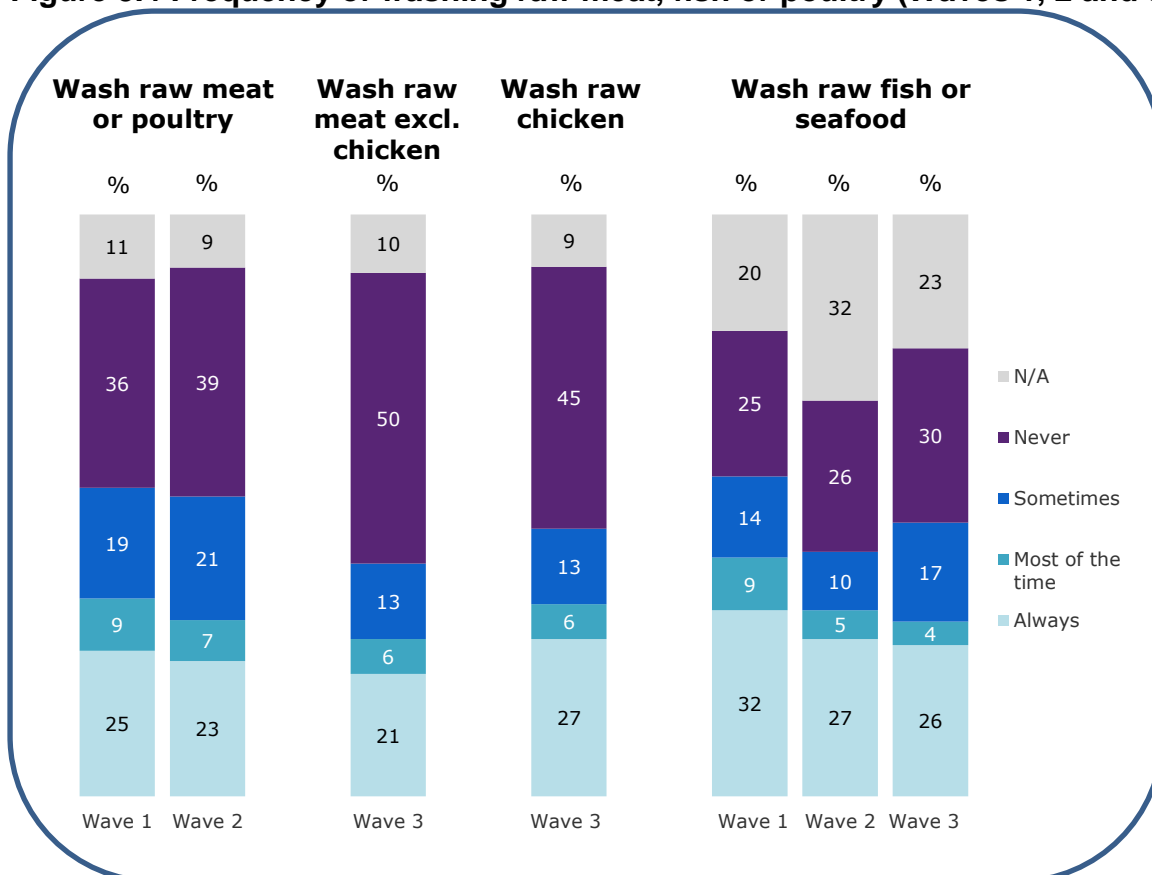
- Of respondents who said that they had a fridge in their household, 69% reported that they stored raw meat and poultry on the bottom shelf of the fridge, in line with recommended practice. Nine per cent said they stored it in the middle of the fridge, while seven per cent said they stored it at the top of the fridge.
- Six per cent reported keeping raw meat and poultry in a separate compartment (compared with 11% at Wave 1), and four per cent reported keeping it away from cooked meats, in line with recommended practice.
- Of respondents who reported storing raw meat and poultry in their fridge, 63% said they stored it in its packaging. This is not in line with recommended practice and was a similar proportion to the 58% that reported this at Wave 2, compared with 43% at Wave 1.
- Twenty-seven per cent of respondents reported that they covered raw meat and poultry with film or foil (compared with 40% at Wave 1), 33% that they kept it in a covered container, and 15% reported that they stored it away from cooked food. These behaviours are in line with recommended practice.

- Nine per cent of respondents reported storing raw meat or poultry on a plate, similar to the proportions at Waves 1 and 2. This is not in line with recommended practice.
- Looking across these reported practices, around half (49%) of those who reported storing raw meat and poultry in their fridge reported practice in line with FSA guidance on how raw meat should be stored in a fridge.¹²
- Respondents were asked whether they stored food in open tins in the fridge. The majority (78%) reported that they never did so, in line with FSA recommended practice, as the tin may contaminate the food. Twenty per cent said that they did this at least some of the time, and three per cent said that they always stored food in open tins in the fridge. These findings were similar to those at Waves 1 and 2.

¹² This was defined as 'On the bottom shelf' or 'In a separate compartment e.g. a meat drawer or salad tray' or 'Kept separate from other foods' or 'Kept in separate/another fridge' or 'Away from cooked foods' at Q4_14, and 'Away from cooked foods' or 'Covered with film / foil' or 'In a covered container' or 'in a drawer / special compartment / allocated shelf in fridge' or 'In plastic bags (any mention)' or 'On a covered plate / bowl / dish' at Q4_15.

3.3 Washing raw meat and fish

Figure 3.4 Frequency of washing raw meat, fish or poultry (Waves 1, 2 and 3)



Source: Q4_1 Thinking about when you are storing, preparing and cooking food, I would like you to tell me whether you do or don't do the following things at all when you are in the kitchen and if so how frequently.

Base: All NI respondents - Wave 1 (506); Wave 2 (504); Wave 3 (524)

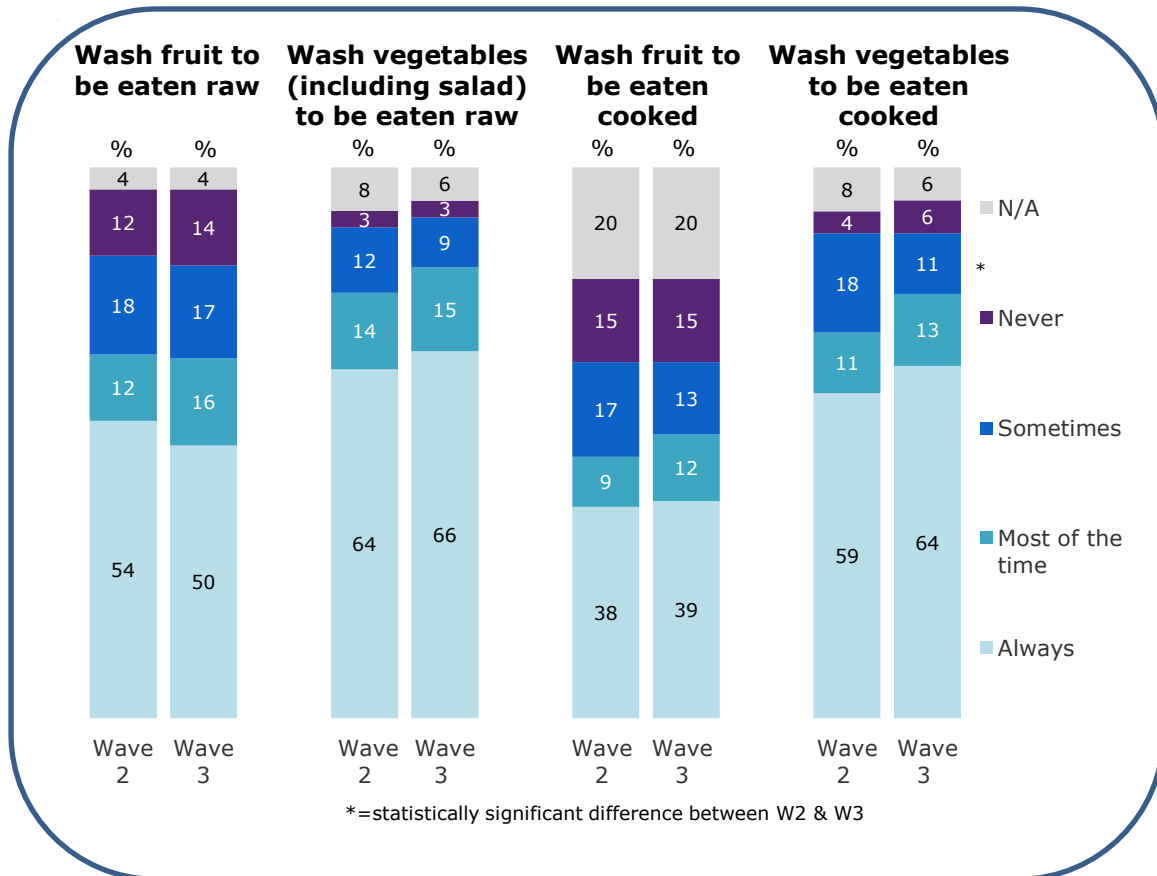
The FSA recommends that raw meat and fish are not washed prior to cooking due to the risk of cross contamination from water splashing on the sink, surrounding surfaces, and utensils, which may come into contact with ready to eat food.

- At Wave 3, 45% of respondents reported never washing raw chicken. Forty-six per cent of respondents reported washing chicken at least sometimes, and 27% reported that they always wash raw chicken. Respondents were less likely to report washing other raw meat compared with raw chicken: 50% reported that they never washed raw meat or poultry other than chicken, and 40% said that they did so at least sometimes. Twenty-one per cent of respondents reported that they always washed raw meat other than chicken.
- Changes to the question at Wave 3 to separate raw meat and poultry other than chicken from raw chicken make comparisons with Waves 1 and 2 difficult. Nevertheless there appeared to have been an increase in the proportion of respondents reporting that they never washed raw meat at Wave 3, particularly meat other than chicken.

- Similar to findings at Waves 1 and 2, 30% of respondents reported that they never washed raw fish or seafood when preparing and cooking it, while 46% reported that they did at least some of the time, compared with 55% at Wave 1. Twenty-six per cent of respondents at Wave 3 said they always washed raw fish or seafood.
- A higher proportion of Wave 3 respondents (23%) said that storing preparing and cooking raw fish and seafood was not applicable to them, compared with nine per cent reporting this for raw chicken and 10% for other raw meat. Similar findings were observed at Waves 1 and 2.

3.4 Washing fruit and vegetables

Figure 3.5 Frequency of washing fruit and vegetables which are going to be eaten raw and cooked (Waves 2 and 3)



Source: Q4_1 Thinking about when you are storing, preparing and cooking food, I would like you to tell me whether you do or don't do the following things at all when you are in the kitchen and if so how frequently.

Base: All NI respondents - Wave 2 (504); Wave 3 (524) (Question not asked at Wave 1)

The FSA recommends that, unless packaging around vegetables says it is 'ready-to-eat', these foods should be washed, peeled or cooked before consumption. Vegetables which are going to be eaten raw should be washed to help minimise the risk of food poisoning (for instance from soil).

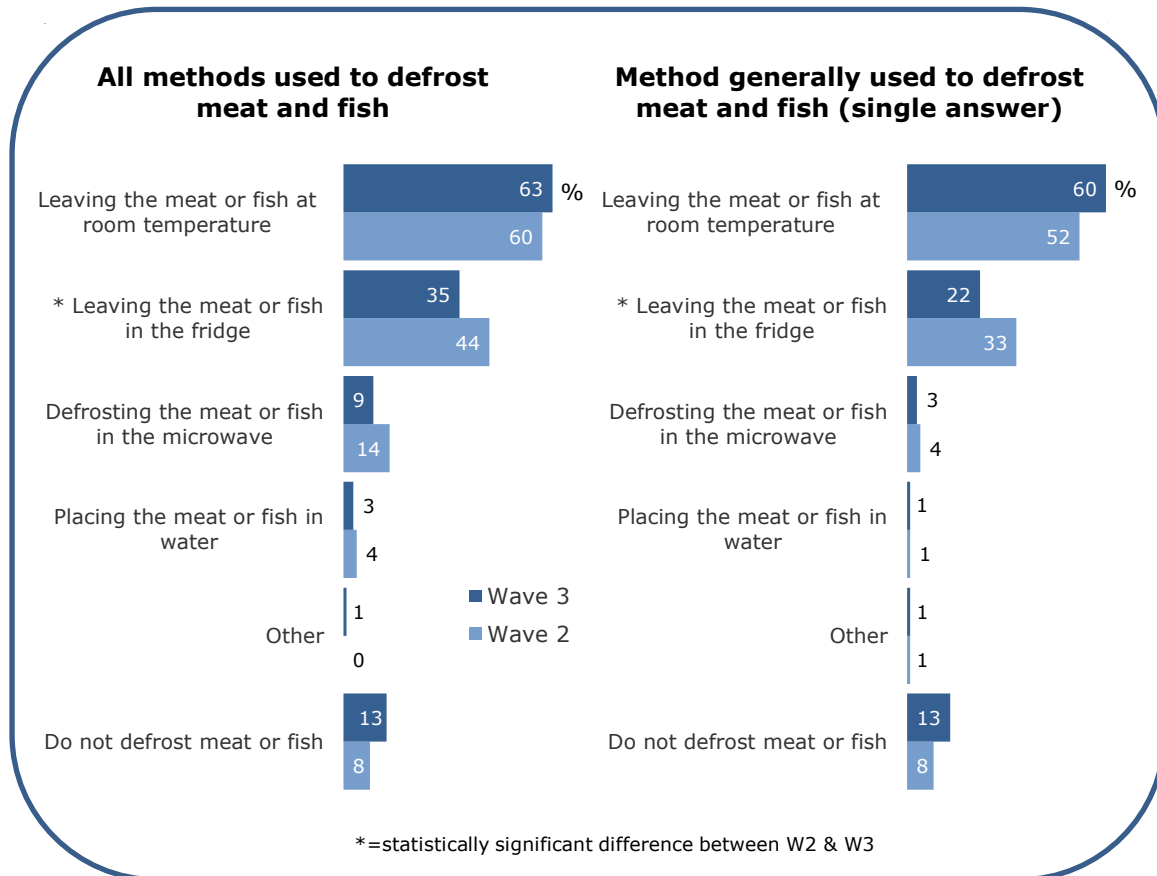
- Fifty per cent of respondents reported that they always washed fruit which was going to be eaten raw whilst 83% said they did this at least some of the time. Fourteen per cent of respondents reported that they never washed fruit which was going to be eaten raw.
- Respondents were more likely to report washing vegetables that were going to be eaten raw; 66% said that they always did, 91% said they did this at least some of the time and three per cent said they never did this.

- A lower proportion of respondents reported that they would always wash fruit that was going to be cooked compared with when it would be eaten raw (39% compared with 50%). Sixty-four per cent reported that they washed fruit that was going to be cooked at least some of the time, while 15% said that they never did.
- Respondents were more likely to report that they washed vegetables which were going to be cooked compared with fruit; 64% said they always did (compared with 39% for fruit), 88% said they did this at least some of the time (compared with 64%) and six per cent reported they never did (compared with 15%).
- The findings for washing fruit and vegetables that are going to be cooked were largely similar to those seen at Wave 2, although respondents were less likely to report that they sometimes wash vegetables that are going to be cooked (11% compared with Wave 2 (18%).
- Differences were observed in the proportion of respondents saying that the question was not applicable to them for the different items: 20% of respondents reported that washing fruit to be cooked was not applicable to them, compared with six per cent reporting this for washing both raw and cooked vegetables, and four per cent for raw fruit.

4. Practices relating to the '4 Cs' – Chilling

4.1 Chilling and defrosting

Figure 4.1 Defrosting meat and fish (Waves 2 and 3)



Source: Q4_1b Which of the following methods do you use to defrost frozen meat or fish? & Q4_1c And which method do you generally use to defrost frozen meat or fish?

Note: respondents were able to give multiple answers to Q4_1b

Base: All NI respondents - Wave 2 (504); Wave 3 (524) (Question not asked at Wave 1)

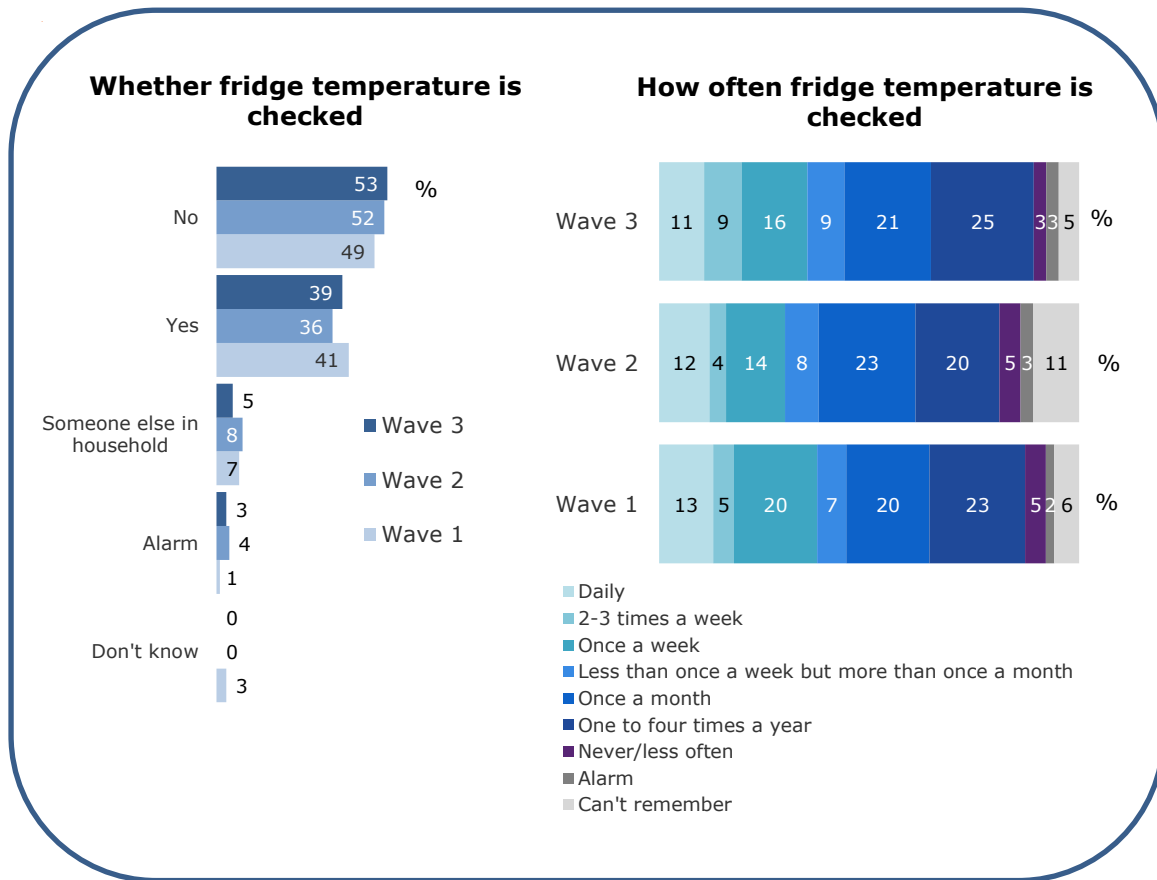
The FSA recommends defrosting food slowly and safely overnight in the refrigerator or using a microwave oven (carefully ensuring that the food is fully defrosted before cooking it straight away). The FSA does not recommend defrosting food at room temperature as this provides ideal conditions for bacteria to grow.

- Respondents were most likely to report leaving meat or fish at room temperature (63%) in order to defrost. Thirty-five per cent of respondents said that they defrosted meat or fish in a refrigerator (compared with 44% at Wave 2) and nine per cent in a microwave oven.

- When asked for the single method they generally used, 60% of respondents said they generally left the meat or fish at room temperature, 22% reported that they generally defrosted it in a refrigerator (compared with 33% at Wave 2) and three per cent said they generally used a microwave oven.

4.2 Checking fridge temperature

Figure 4.2 Checking fridge temperature (Waves 1, 2 and 3)



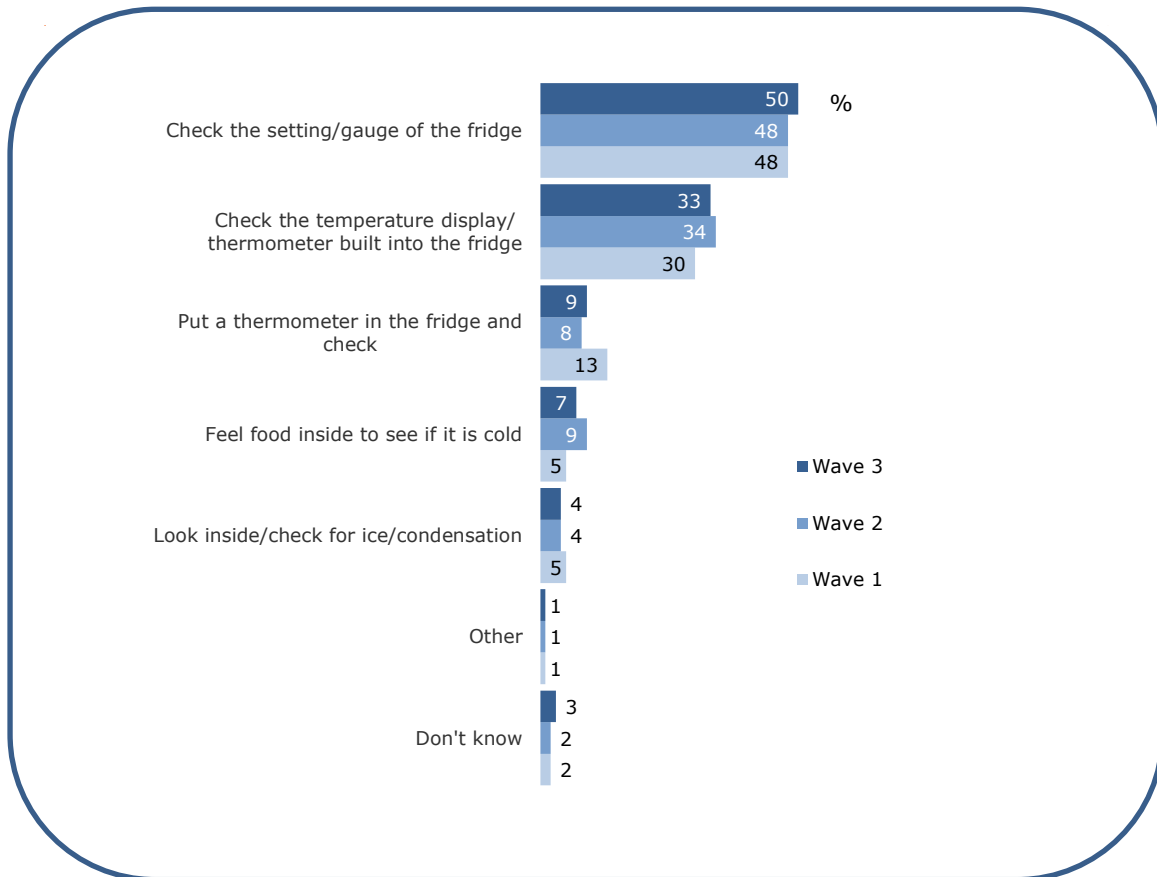
Source: Q4_9 Do you ever check your fridge temperature? & Q4_10 How often do you or another person in your household check the temperature of the fridge?

Base: Q4_9 All NI respondents - Wave 1 (506); All NI respondents who have a fridge in their household - Wave 2 (494); Wave 3 (518) & Q4_10 All NI respondents who check their fridge temperature – Wave 1 (242); Wave 2 (215); Wave 3 (236)

The FSA recommends that fridge temperatures are checked regularly and that the temperature is kept between 0-5°C to help stop food poisoning bacteria such as *Listeria monocytogenes* from growing in food.

- Of respondents who had a fridge, 44% reported that they or someone else checked the temperature, whilst 53% reported that they never checked their fridge temperature. Around four in ten (39%) said they checked it themselves.
- A minority of respondents (three per cent) said they did not need to check their fridge temperature as their fridge had an alarm if it was too hot or cold.
- Sixty-five per cent of respondents who checked their fridge temperature said that they did so at least once a month, in line with recommended practice, similar to Wave 1 (64%). Thirty-six per cent said that they checked at least once a week and 11% said that they checked daily.

Figure 4.3 How fridge temperature is checked (Waves 1, 2 and 3)



Source: Q4_11 Still thinking about fridge temperatures, can you tell me how you normally check the temperature?

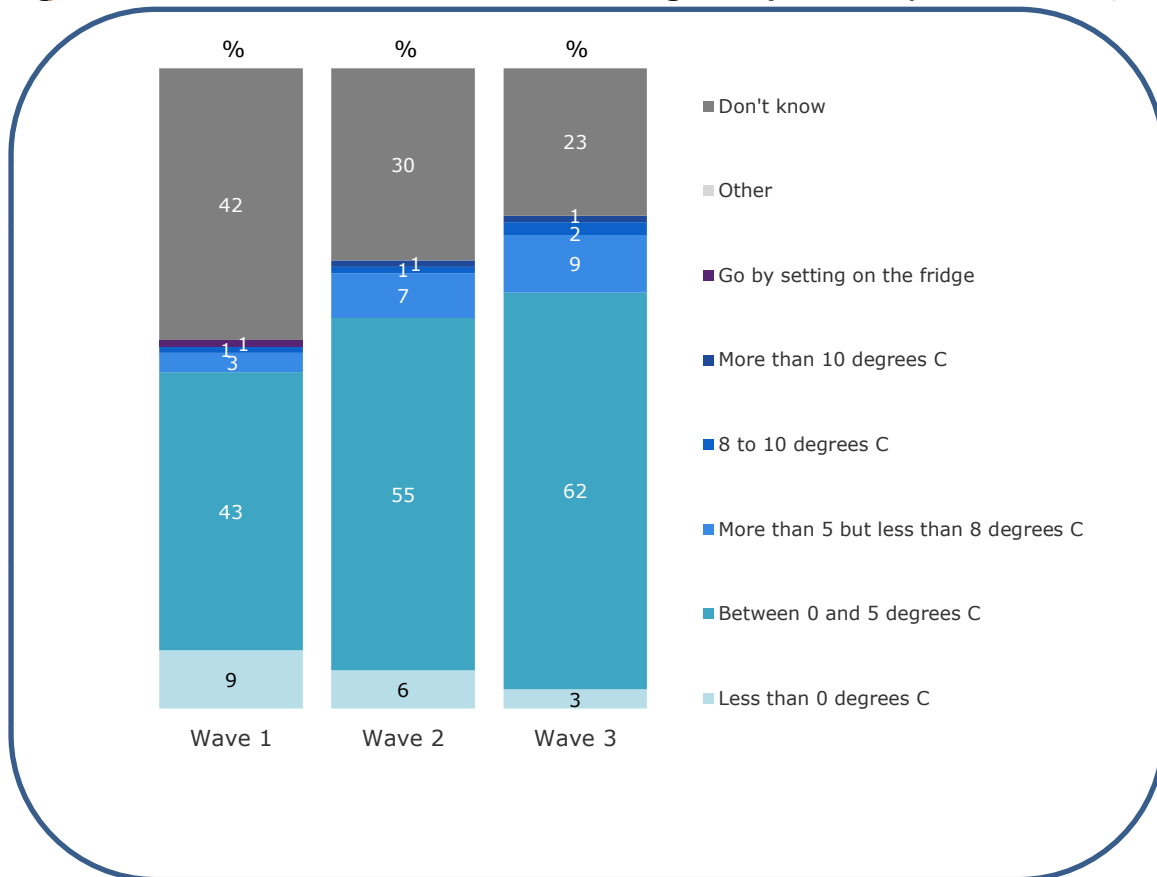
Note: respondents were able to give multiple answers

Note: responses to Q4_11 were given spontaneously, with no prompted response list shown to respondents.

Base: NI Respondents who do not have a fridge alarm - Wave 1 (237); Wave 2 (209); Wave 3 (230)

- Respondents who reported checking their fridge temperature, but did not have an alarm, were asked how they normally checked it. Findings were similar to those at Waves 1 and 2.
- **The use of a thermometer is the recommended method for checking fridge temperature.** Nine per cent of respondents reported using this method, and 33% reported checking the temperature display or thermometer built into the fridge.
- The most common method reported was to check the setting or gauge of the fridge (50%). This is not a recommended method of checking the fridge temperature as these are not usually an indication of temperature.

Figure 4.4 Awareness of recommended fridge temperature (Waves 1, 2 and 3)



Source: Q4_12 What do you think the temperature inside your fridge should be?

Note: responses to Q4_12 were given spontaneously, with no prompted response list shown to respondents.

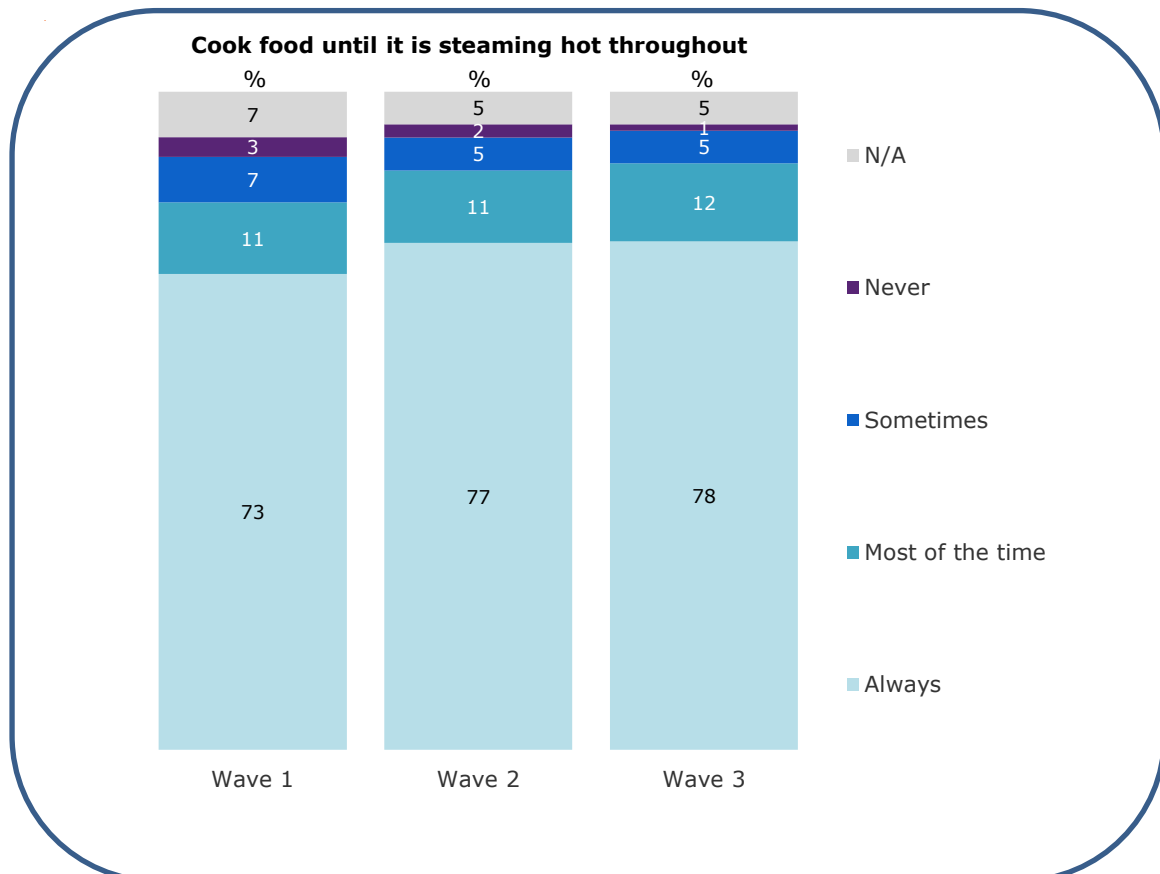
Base: All NI respondents - Wave 1 (506); All NI respondents with a fridge in their household - Wave 2 (494); Wave 3 (518)

- When asked what respondents thought the temperature inside the fridge should be, 62% said the fridge temperature should be between 0°C and 5°C (the recommended temperature). This was similar to the proportion that reported this at Wave 2, compared with 43% at Wave 1.
- Twenty-three per cent of respondents at Wave 3 reported that they did not know what the fridge temperature should be, similar to the proportion at Wave 2 and lower than that at Wave 1 (42%). Other respondents gave a range of answers, with more providing a response above the recommended temperature range than below the recommended range.
- In total 10% of respondents who had a fridge reported behaviours in line with FSA recommended practice for checking that their fridge temperature remains between 0°C and 5°C at least monthly using a thermometer.

5. Practices relating to the ‘4 Cs’ – Cooking

5.1 Cooking food until steaming hot

Figure 5.1 Frequency of cooking food until it is steaming hot throughout (Waves 1, 2 and 3)



Source: Q4_1 Thinking about when you are storing, preparing and cooking food, I would like you to tell me whether you do or don't do the following things at all when you are in the kitchen and if so how frequently?

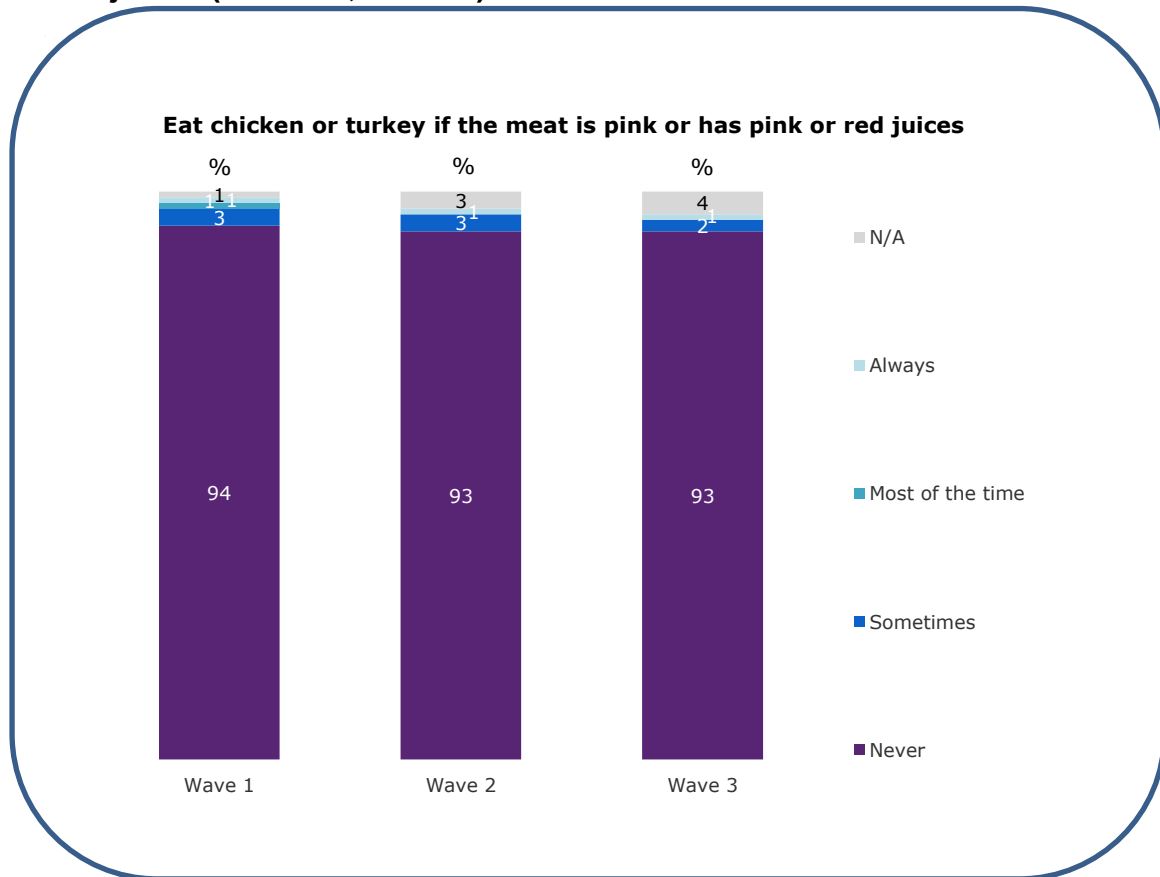
Base: All NI respondents - Wave 1 (506); Wave 2 (504); Wave 3 (524)

The FSA recommends that all food is cooked until it is steaming hot throughout.

- At Wave 3, 78% of respondents reported that they always cooked food until it was steaming hot throughout, while one per cent of respondents reported that they never did this. These were similar to the proportions recorded at Waves 1 and 2.

5.2 Cooking and eating meat, poultry, sausages or burgers

Figure 5.2 Frequency of eating chicken or turkey if the meat is pink or has pink or red juices (Waves 1, 2 and 3)



Source: Q4_1 Thinking about when you are storing, preparing and cooking food, I would like you to tell me whether you do or don't do the following things at all when you are in the kitchen and if so how frequently?

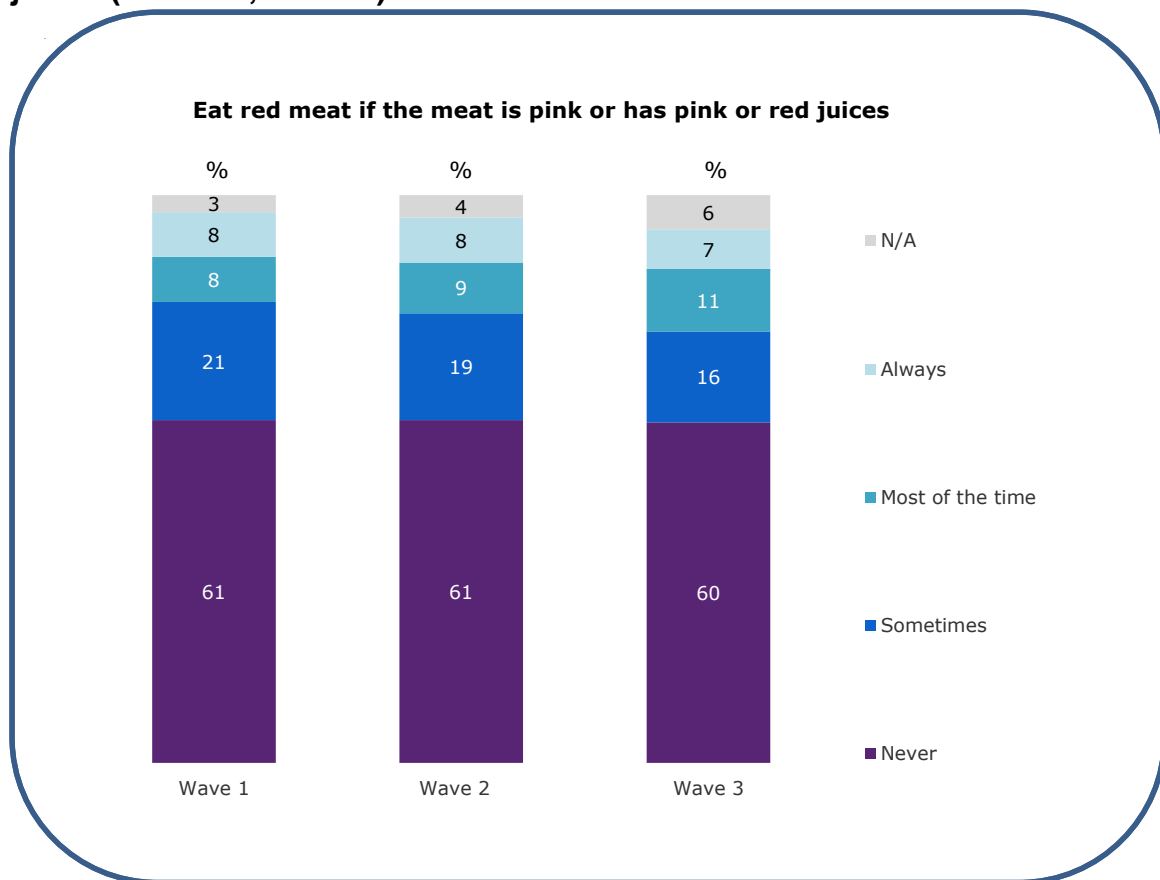
Base: All NI respondents - Wave 1 (506); Wave 2 (504); Wave 3 (524)

The FSA advises that poultry and game such as chicken, turkey, duck and goose, and other meats including pork, burgers, sausages and kebabs should be properly cooked all the way through, that is, they are not pink and have no pink or red juices. Steaks and other whole cuts of beef and lamb may be eaten rare, as long as they have been properly cooked and sealed on the outside¹³.

- Three per cent of respondents reported eating chicken or turkey if the meat was pink or had pink or red juices.
- Ninety-three per cent of respondents reported that they never ate chicken or turkey if the meat was pink or had pink or red juices, consistent with previous waves (93% at Wave 2 and 94% at Wave 1).

¹³ Advice about steak and beef is fine for the majority, but the FSA advises at risk groups (especially pregnant mothers, the very elderly and those who are immuno-compromised) not to eat rare lamb owing to risk of toxoplasmosis.

Figure 5.3 Frequency of eating red meat, if the meat is pink or has pink or red juices (Waves 1, 2 and 3)

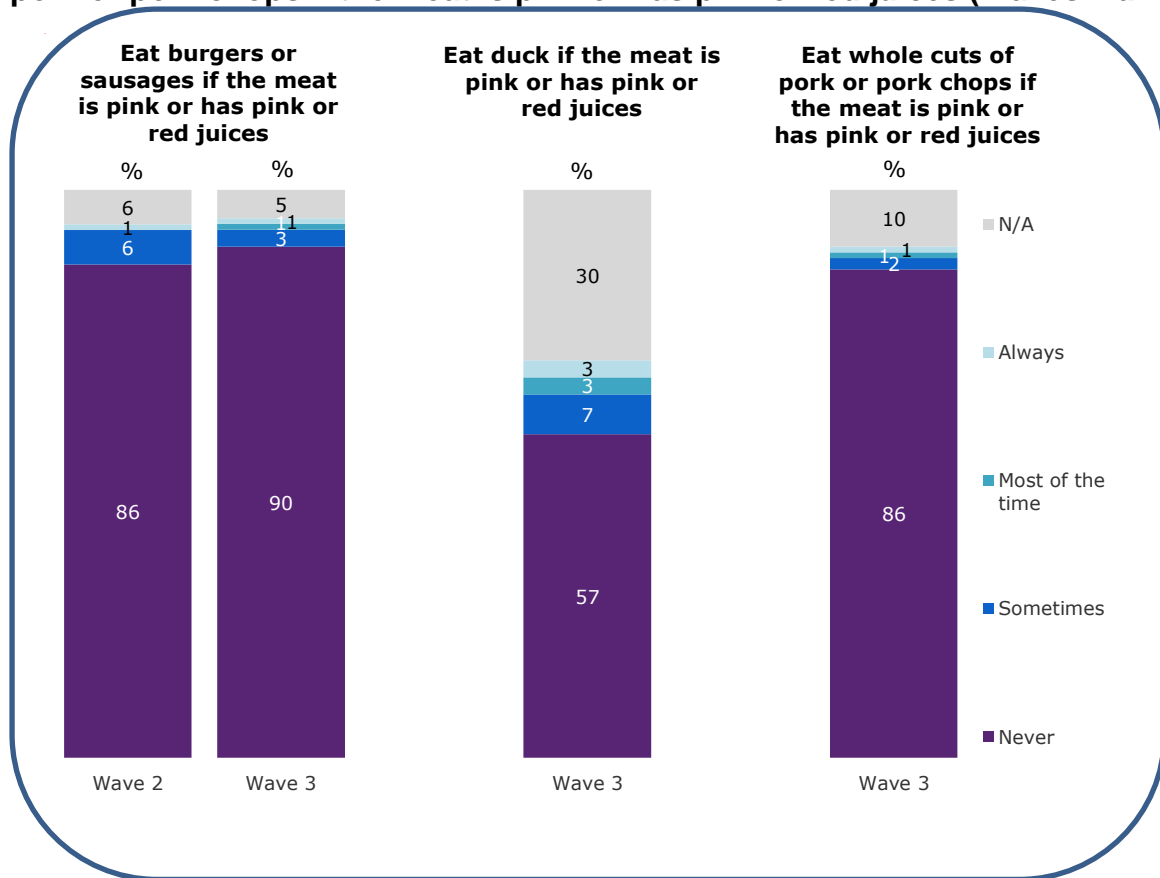


Source: Q4_1 Thinking about when you are storing, preparing and cooking food, I would like you to tell me whether you do or don't do the following things at all when you are in the kitchen and if so how frequently?

Base: All NI respondents - Wave 1 (506); Wave 2 (504); Wave 3 (524)

- For red meat, 11% of respondents said they always ate red meat if it was pink or had pink or red juices, and 60% reported that they never did.
- There were no statistically significant differences between the waves in the reported frequencies of eating red meat if the meat was pink or had pink or red juices.

Figure 5.4 Frequency of eating burgers or sausages, duck, or whole cuts of pork or pork chops if the meat is pink or has pink or red juices (Waves 2 and 3)



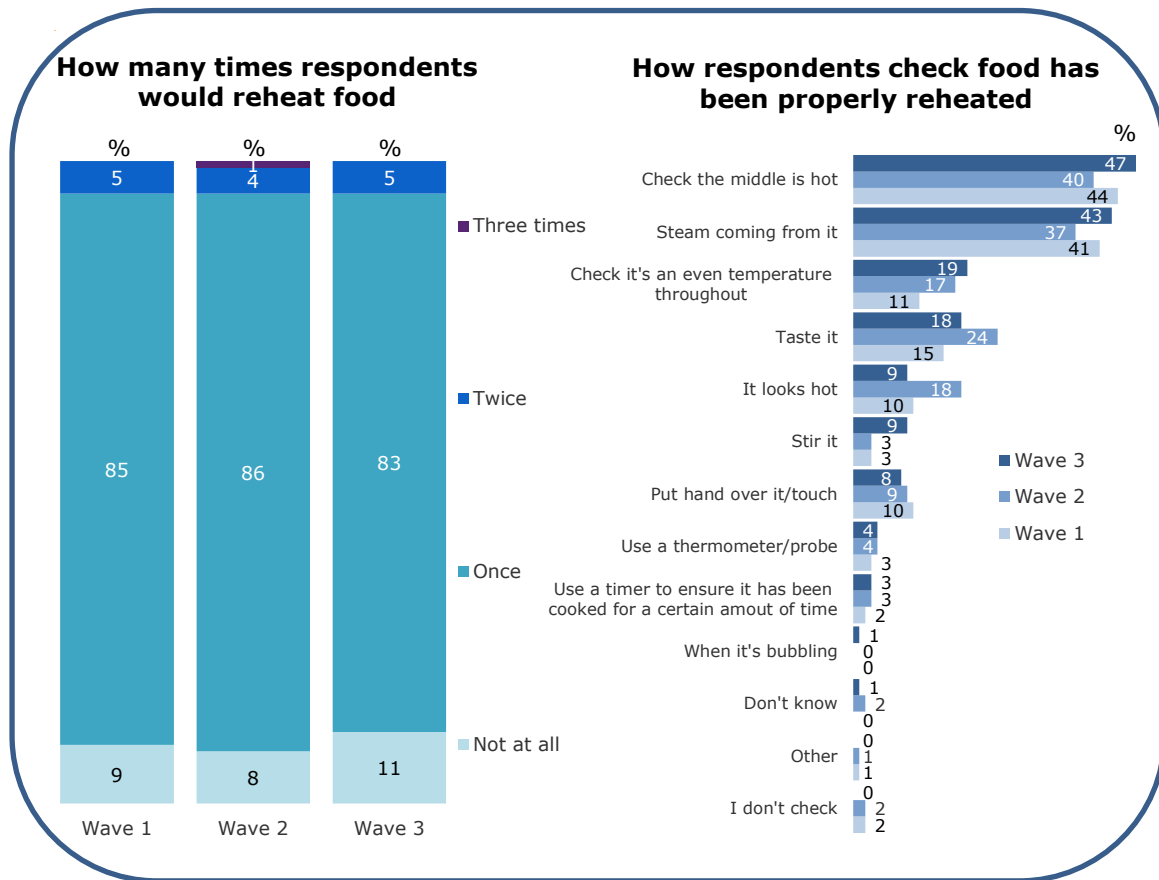
Source: Q4_1 Thinking about when you are storing, preparing and cooking food, I would like you to tell me whether you do or don't do the following things at all when you are in the kitchen and if so how frequently?

Base: All NI respondents - Wave 2 (504); Wave 3 (524) (Question only asked at Waves shown in Figure 5.4)

- Nine in ten respondents (90%) reported that they never ate burgers or sausages if the meat was pink or had pink or red juices. Five per cent of respondents reported that they ate burgers or sausages at least sometimes if the meat was pink or had pink or red juices. This was similar to the proportion at Wave 2.
- Fifty-seven per cent of respondents reported never eating duck if it had pink meat or pink or red juices, and a further 30% said that this question was not applicable to them. In total, 13% said they did eat duck with pink meat or pink or red juices at least some of the time.
- Eighty-six per cent of respondents said they never ate pork if it was pink or had pink or red juices and four per cent said they did this at least some of the time.

5.3 Reheating

Figure 5.5 Reheating food (Waves 1, 2 and 3)



Source: Q4_25 How many times would you consider re-heating food after it was cooked for the first time? & Q4_26 And how do you usually tell that food has been re-heated properly? (answers given by more than one per cent of respondents shown)

Note: respondents were able to give multiple answers to Q4_26

Note: responses to both questions were given spontaneously, with no prompted response list shown to respondents

Base: Q4_25 All NI respondents who have leftovers - Wave 1 (480); Wave 2 (444); Wave 3 (476) & Q2_46 All NI respondents who have leftovers and would consider re-heating - Wave 1 (437); Wave 2 (409); Wave 3 (426)

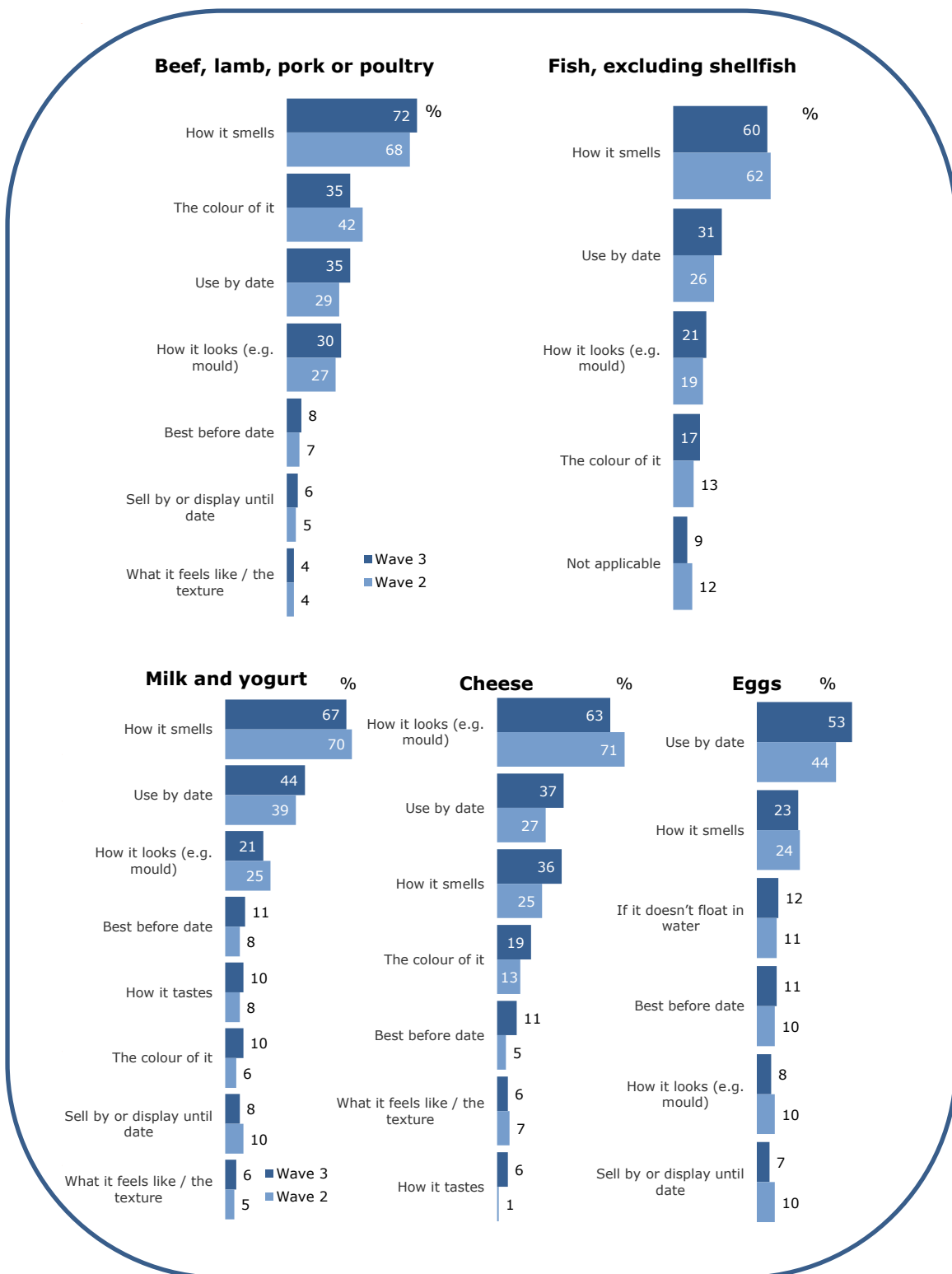
The FSA recommends that leftovers should not be reheated more than once and should be steaming hot throughout before serving.

- Eighty-three per cent of respondents who have leftovers reported that they would only re-heat food once, and 11% said they would not re-heat food at all. Six per cent of respondents reported that they would re-heat food twice or more.
- Forty-seven per cent of respondents who would consider reheating food reported testing if food had been properly reheated by checking if the middle is hot, which was the most commonly reported method. Forty-three per cent reported seeing if steam is coming out of it.

- Fewer respondents at Wave 3 reported that they would tell that food had been re-heated properly by whether it looks hot (nine per cent) compared with Wave 2 (18%), although similar to Wave 1 (10%). A greater proportion of respondents at Wave 3 reported checking by stirring the food (nine per cent) than at Waves 1 or 2 (three per cent at both waves).
- A minority of respondents (less than one per cent) reported that they did not check to see if food had been re-heated properly.

6. Methods used to tell whether food is safe to eat

Figure 6.1 Methods used to tell whether food is safe to eat (Waves 2 & 3)



Source: Q4_18 For each of the following foods, please say how you can tell whether it is safe to eat or use in cooking? Note: respondents were able to give multiple answers / only responses of five per cent or more are shown; Responses were given spontaneously, with no prompted response list shown to respondents.

Base: All NI respondents - Wave 2 (504); Wave 3 (524) (Question not asked at Wave 1)

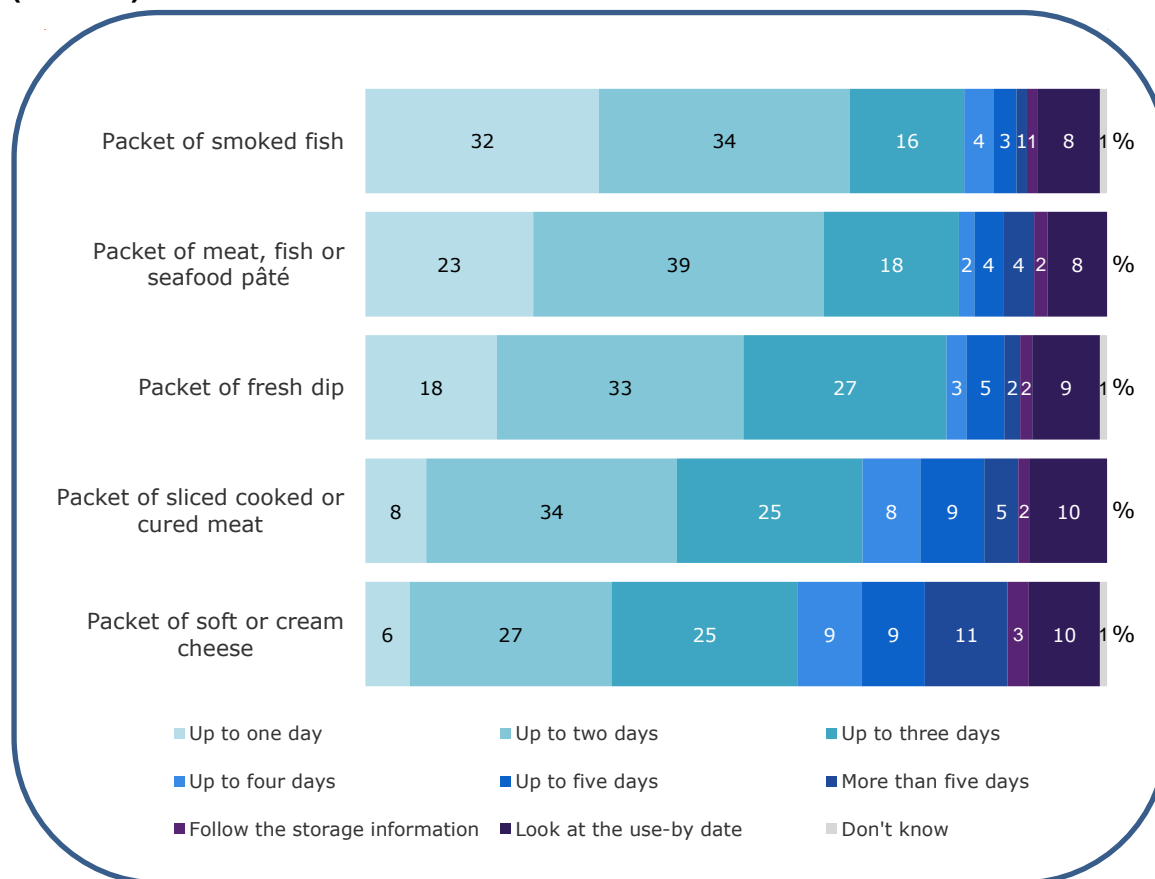
The FSA recommends that even if food looks and smells fine, the use by date is the best indicator of whether food is safe to eat¹⁴.

- How food smelled was one of the most common ways respondents said they used to tell whether a food was safe to eat, and was the most commonly reported method for meat, fish and milk or yoghurt.
- For example, around two-thirds of respondents (67%) reported that they used this method when checking whether milk or yoghurt was safe to eat, 72% used smell as an indicator for meat and 60% for fish.
- How food looks (for example the appearance of mould) was the most common practice (reported by 63% of respondents) for telling whether cheese was safe to eat. For eggs, the most frequently reported method was use by date (reported by 53% of respondents).
- Use by dates were also commonly mentioned as an indicator of whether other foods were safe to eat; 44% of respondents reported that they used them for checking milk or yoghurt, 37% for checking cheese, 35% for meat and 31% for fish.
- Twelve per cent of respondents said that they checked whether eggs floated in water to tell whether they were safe to eat.
- For each food asked about, two per cent of respondents or less reported that they used food on the day it was bought or bought it fresh so that they knew it was safe to eat, with the highest proportion reporting this for eggs (two per cent).

¹⁴ It is worth noting that eggs and some dairy products have a best before date instead of a use by date.

6.1 Storage information

Figure 6.2 Maximum time respondents would eat / use food after opening it (Wave 3)



Source: Q4_23a If you open ... and keep it stored in the fridge, what is the maximum number of days you would keep it in the fridge for before deciding you would definitely not eat it?

Note: responses to Q4_23a were given spontaneously, with no prompted response list shown to respondents

Base: All NI respondents, excluding those who do not eat / use each food item¹⁵ – Packet of sliced cooked or cured meat (500); Packet of meat, fish or seafood pâté (386); Packet of fresh dip (372); Packet of smoked fish (354); Packet of soft or cream cheese (384)

The FSA recommends storing opened foods in the fridge and using within two days, unless the manufacturer's instructions state otherwise.

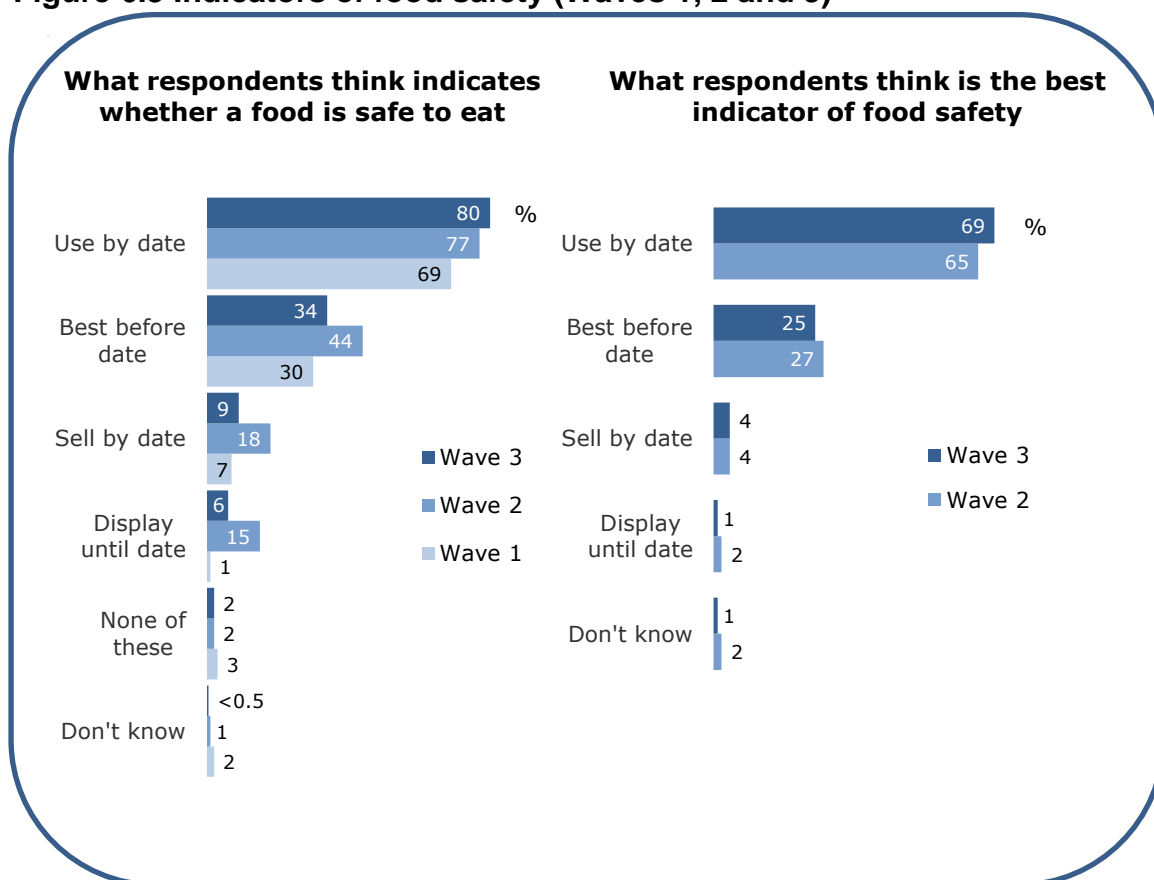
- Among those who reported eating specific foods, respondents were most likely to report that they consumed smoked fish (66%) and meat, fish or seafood pâté (62%) within two days of opening.

¹⁵ All respondents were asked about all food items, but were given the option to state that they did not eat / use each. These respondents have been removed from the data reported here, so that it reflects only those reporting they actually use each item, making it easier to make comparisons across the different food types. Out of all NI respondents, five per cent said they did not eat / use packets of sliced cooked or cured meat, 26% did not eat / use packets of meat, fish or seafood pâté, 29% did not eat / use packets of fresh dip, 32% did not use packets of smoked fish and 27% did not eat / use packets of soft or cream cheese.

- Respondents who reported eating these foods were least likely to report consuming soft cheese and sliced meat within two days of opening (reported by 42% and 33% respectively) and most likely to say they would eat them after more than two days (54% and 46% respectively).
- A minority of respondents reported that they would look at the use by date or follow the storage information on the product. Between eight and ten per cent of respondents who said they ate each product stated they would look at the use by date and between one and three per cent stated that they would follow storage information.
- The findings were largely similar to those at Wave 2, however there were some differences in the reported time periods for which respondents would use soft or cream cheese. For example, the proportion of respondents who said they would use this for up to two days after opening was 27% at Wave 3 compared with 17% at Wave 2, and the proportion who said they would use this more than five days after opening was 11% compared with 21% at Wave 2.

6.2 Use by and best before dates

Figure 6.3 Indicators of food safety (Waves 1, 2 and 3)



Source: Q4_19 Which of these indicates whether food is safe to eat? & Q4_19b Which of these is the best indicator of whether food is safe to eat?

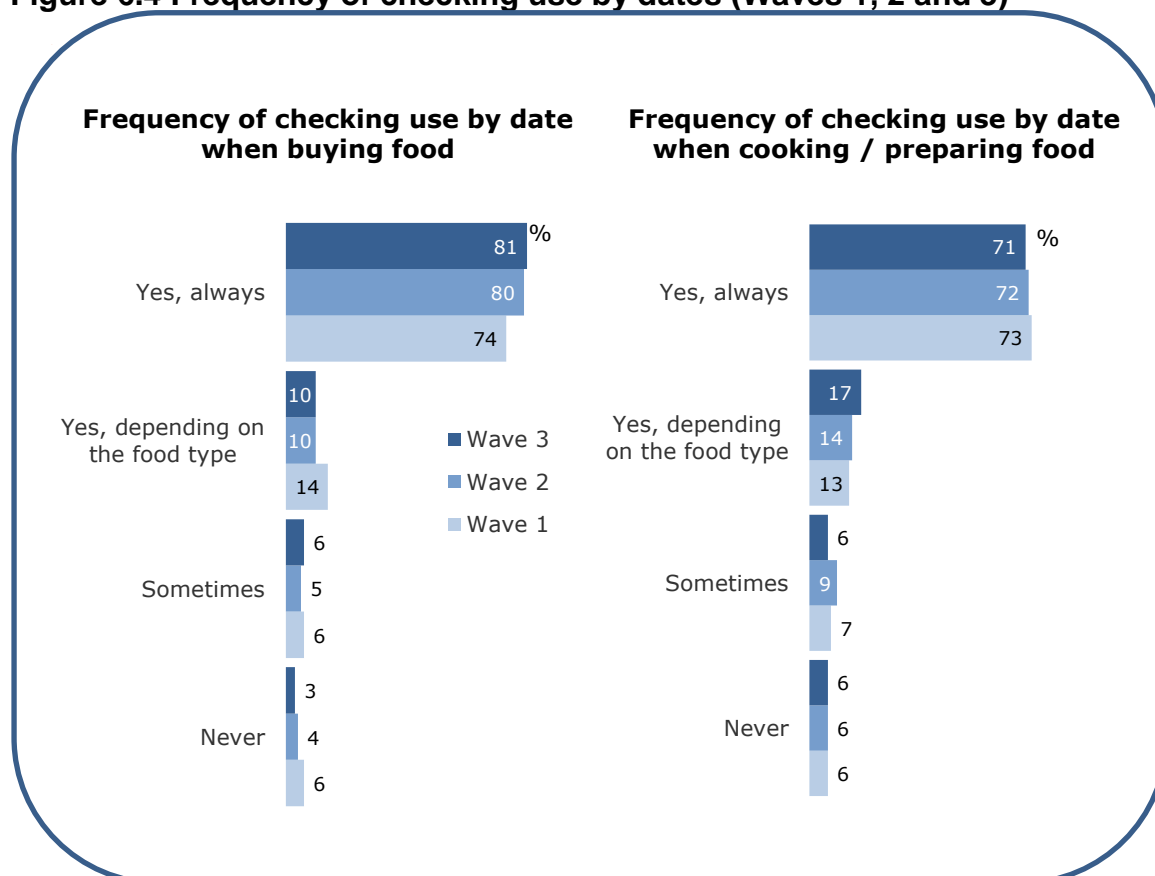
Note: respondents were able to give multiple answers at Q4_19

Base: Q4_19 All NI respondents - Wave 1 (506); Wave 2 (504); Wave 3 (524) & Q4_19b All NI respondents- Wave 2 (504); Wave 3 (524) (Question not asked at Wave 1)

The FSA recommends that the use by date is the best indicator of whether food is safe to eat and food should not be eaten after this date.

- Eight in ten respondents (80%) cited use by dates as an indicator of whether food was safe to eat, compared with 69% at Wave 1.
- The proportion of respondents who *only* mentioned the use by date was 60%, compared with 48% at Wave 2 but similar to 54% at Wave 1.
- Five per cent of respondents mentioned all four options (use by, best before, sell by, display until dates) as indicators of whether food is safe to eat.
- Respondents were then asked which one of the four dates was the best indicator of food safety; 69% selected the use by date while a quarter (25%) selected the best before date.

Figure 6.4 Frequency of checking use by dates (Waves 1, 2 and 3)

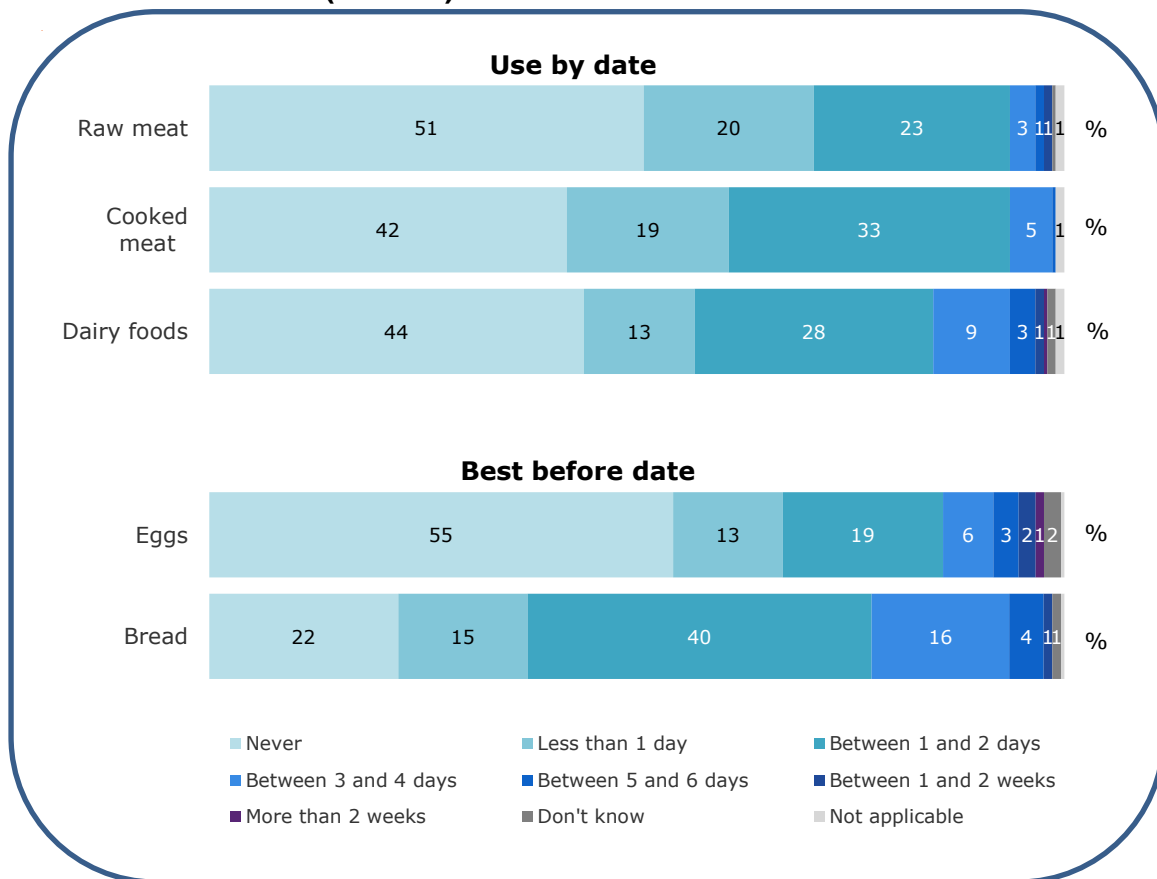


Source: Q4_21 Do you check use by dates when you are buying food? & Q4_22 Do you check use by dates when you are about to cook or prepare food?

Base: All NI respondents - Wave 1 (506); Wave 2 (504); Wave 3 (524)

- When asked if they checked use by dates when buying food, 81% of respondents reported that they always did this regardless of food type and 10% reported that they checked use by dates when buying food depending on food type (both similar to the proportions reporting this at Waves 1 and 2).
- Three per cent of respondents at Wave 3 reported that they never checked use by dates when buying food, similar to the proportions at Waves 1 and 2.
- The proportion of respondents who reported checking use by dates when cooking or preparing food was lower than that for buying food, with 71% saying they always checked the date, similar to Waves 1 and 2 (73% and 72% respectively). Seventeen per cent said it depended on food type.
- A minority (six per cent) reported that they never checked the use by date when cooking or preparing food.
- Overall around seven in ten respondents (72%) reported behaviours in line with FSA recommended practice for use by dates, stating that the use by date is an indicator of whether food is safe to eat, and that they checked the date when they were about to cook or prepare food.

Figure 6.5 Maximum time after use by date / best before date that respondents would eat / use food (Wave 3)



Source: Q11_6 What is the maximum time after the use by date / best before date that you would use / eat...?
 Note: responses to Q11_6 were given spontaneously, with no prompted response list shown to respondents

Base: All NI respondents - (524)

The FSA recommends that foods should be consumed before the specified use by date as it could be dangerous to eat food after this, even though it might look and smell fine.¹⁶

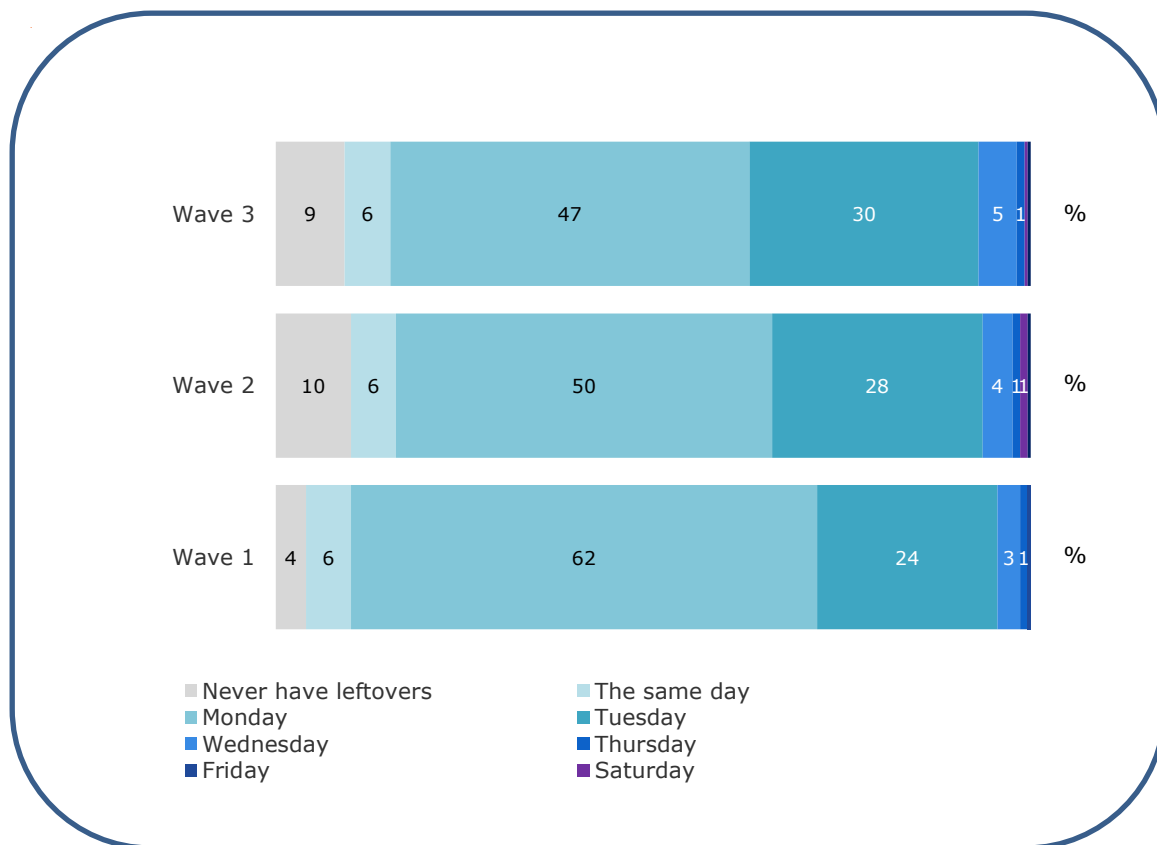
Best before dates appear on food with a longer shelf life. They show how long the food will be at its best quality. Using food after the best before date does not mean it will be unsafe, with the exception of eggs (raw egg must be consumed by the best before date although cooked egg, provided it is cooked thoroughly by the best before date, can be consumed a day or two after the best before date).

¹⁶ Although dairy foods were asked about with respect to 'use by' dates, current guidelines state that each dairy product should have a date mark which is appropriate for the specific product. Foods which are microbiologically highly perishable or likely to become an immediate danger to human health after a short period of time will have a use by date. Other products may have a best before date. Further detail of these guidelines can be found at the following link: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69316/pb132629-food-date-labelling-110915.pdf

- Respondents were more likely to report that they would eat bread after the recommended date compared with the other foods asked about. For example 76% of respondents said they would eat bread after the best before date and 21% said they would eat it three days or more after the best before date.
- Respondents were least likely to report that they would eat eggs after the recommended date, with 55% of respondents saying they would never do so. Twelve per cent of respondents reported that they would eat eggs three or more days after the best before date, and 14% said they would do so for dairy foods. This was greater than the proportion that reported they would eat raw or cooked meat after the recommended date (both five per cent).
- These findings were similar to those at Wave 2.

6.3 Maximum time for keeping leftovers

Figure 6.6 Last day respondents would consider eating leftovers from a meal (having cooked it on Sunday) (Waves 1, 2 and 3)



Source: Q4_24 If you made a meal on Sunday, what is the last day that you would consider eating the leftovers?
 Note: responses to Q4_24 were given spontaneously, with no prompted response list shown to respondents

Base: All NI respondents - Wave 1 (506); Wave 2 (504); Wave 3 (524)

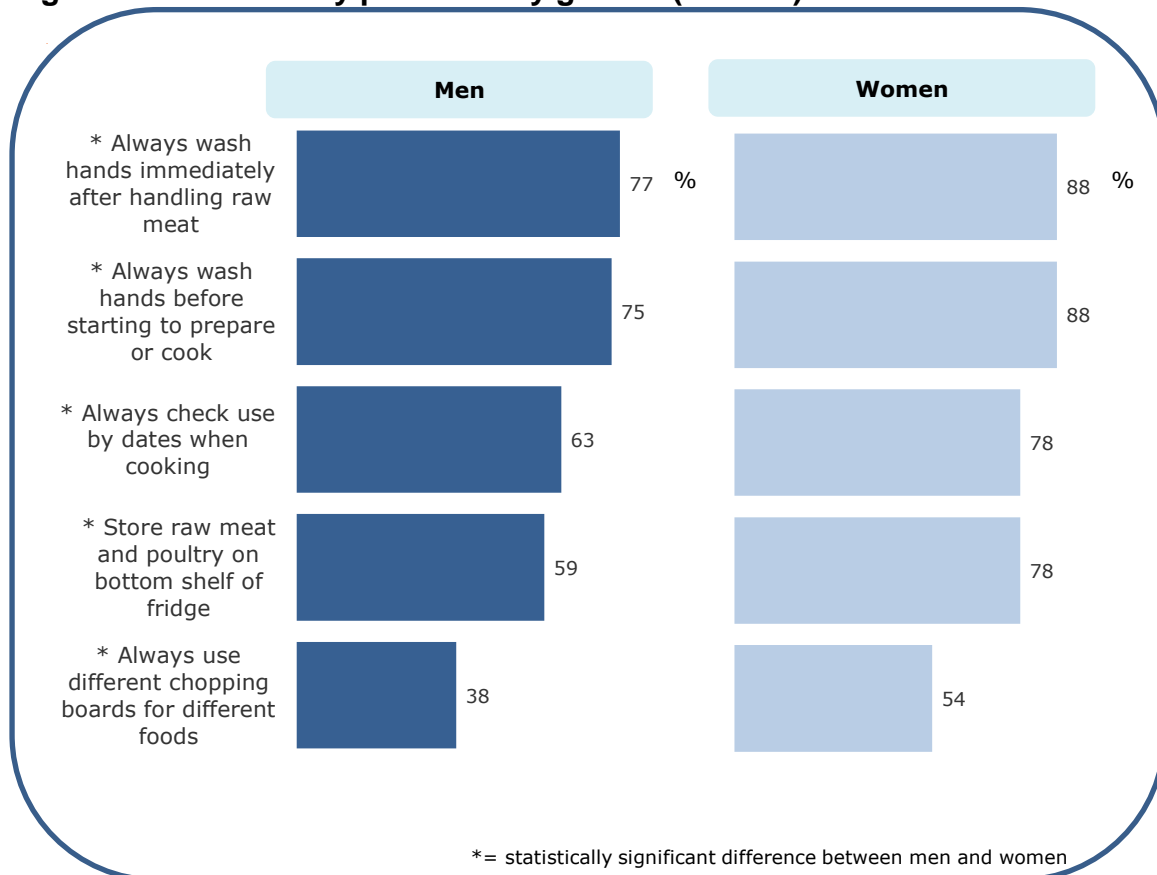
The FSA recommends that leftovers should be used within two days (that is, up to Tuesday if cooked on Sunday).

- Eighty-four per cent respondents reported that, if they cooked a meal on Sunday, Tuesday would be the last day they would consider eating the leftovers, in line with recommended practice.
- Respondents most commonly reported that they would eat the leftovers by the next day (47%) and 30% reported that they would consider eating them up to two days after cooking the meal.
- Seven per cent of respondents reported that they would consider eating the leftovers three days or more after cooking (i.e. Wednesday or after).
- These findings were similar to those at Wave 2, although the percentage reporting that they would use leftovers within two days (84%) remained lower than at Wave 1 (92%).

7. Variation in food safety practices ('4 Cs' and methods used to tell whether food is safe to eat) by different groups in the population¹⁷

Variation by gender and age, including differences between the survey waves

Figure 7.1 Food safety practices by gender (Wave 3)



Source: Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen, do you wash hands immediately after handling raw meat, poultry or fish?; Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen, do you wash hands before starting to prepare or cook food?; Q4_22 Do you check use by dates when you are about to cook or prepare food?; Q4_14 Where in the fridge do you store raw meat and poultry?; Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen, do you use different chopping boards for different foods?

Note: Responses to Q4_14 were given spontaneously, with no prompted response list shown to respondents.

Base: NI Men - Wave 3 (219); NI Women – Wave 3 (305)

- As at Waves 1 and 2, reported food safety practices were found to vary considerably by **gender** with women being generally more likely than men to report food safety practices in line with recommended practices for:
 - Always washing hands before preparing food (88% of women compared with 75% of men) and after handling raw meat (88% compared with 77%);

¹⁷ The following variables were analysed to identify statistically significant differences: age, gender and NIMDM.

- Always using different chopping boards for different foods (54% compared with 38%);
 - Storing certain foods in certain parts of the fridge (88% compared with 73%);
 - Always storing raw meat on the bottom shelf of the fridge (78% compared with 59%); and
 - Always checking use by dates before cooking or preparing food (78% compared with 63%).
- These results were similar to those at Wave 2.
 - Women were more likely than men to report that they would use the best before date to tell whether each type of food asked about was safe to eat or use in cooking (beef, lamb and poultry: 12% of women reported using the best before date compared with three per cent of men; milk: 17% compared with five per cent; cheese: 16% compared with five per cent; eggs: 15% compared with seven per cent; and fish: 10% compared with two per cent). There were no statistically significant differences between men and women reporting use of best before dates at Wave 2.
 - At Wave 2, women were more likely than men to say that they would tell whether raw beef, lamb or pork were safe to use in cooking by smelling the food, but this difference was not found at Wave 3. Women were also more likely than men at Wave 2 to report using the use by date to tell if milk or yoghurt or eggs were safe to eat. This difference was also not observed at Wave 3.
 - Variation by **age** was also observed. As at Waves 1 and 2, younger respondents (those aged 16-24) differed from other age groups in how likely they were to report some practices in line with recommended practice for food safety. For example:
 - Fewer reported always washing fruit that is going to be eaten raw (e.g. 37% reported always washing fruit to be eaten raw, compared with 68% of those aged 60 and over);
 - A greater proportion reported behaviour in line with recommended practice for use by dates¹⁸ (80% compared with 59% of those aged 65 and over).
 - Similar to findings at Waves 1 and 2, the oldest respondents (**aged 75 and over**) were also found to be less likely to report some food safety practices in line with recommended practice, compared with other age groups. For example:
 - Lower levels of hand washing (63% of those aged 75 and over reported behaviour in line with recommended practice¹⁹ compared with 82% of those aged 35-54);

¹⁸ Recommended practice is being aware that the use by date is an indicator of whether food is safe to eat, and always checking the use by date before cooking and preparing food

¹⁹ Recommended practice is to always wash hand before preparing food and after handling raw meat, poultry or fish

- Fewer reporting behaviours in line with recommended practice for storing raw meat in the fridge²⁰ (35% of those aged 75 and over who stored raw meat or poultry in the fridge compared with 54% of those aged 35-54 who stored raw meat or poultry in the fridge);
- Less likely to always use different chopping boards for different foods (31% compared with 48% of respondents aged 16-74);
- Less likely to say their fridge temperature should be between 0°C and 5°C (39% compared with 65% of 16-74 year olds); and
- Less likely to always check use by dates when cooking or preparing food (53% compared with 72% of those aged 16-74).

Other variation at Wave 3

- There were a number of variations by **Northern Ireland Multiple Deprivation Measure (NIMDM)**. Respondents living in more deprived areas were more likely to say that they never used different chopping boards for different foods compared with those in the least deprived areas (23% in quintiles one to four compared with nine per cent in quintile five).
- Respondents in less deprived areas were more likely to report that they ate red meat when it was pink or had pink or pink or red juices (47% of those in quintiles four and five did so at least sometimes compared with 27% of those in quintiles one to three) or pork (10% of respondents in quintile five compared with less than one per cent in quintile one).
- Respondents in the middle quintile were less likely to report washing raw fish or seafood than those in the most and least deprived areas (33% of respondents in quintile three reported doing this at least sometimes, compared with 57% of those in quintile one and 53% of those in quintile five).
- Respondents living in the most deprived areas were less likely to report always washing fruit to be eaten raw (29% of those in quintile one compared with 55% of those in quintiles two to five), or vegetables to be eaten raw (49% compared with 69%). They were also less likely to report always washing fruit to be eaten cooked (18% compared with 44%). A greater percentage of respondents in the most deprived areas (31% in quintile one) did not report practices in line with recommended practice for cleaning²¹ compared with those in quintile four (16%).
- Respondents in the most deprived areas were more likely to say that questions relating to storing certain types of food were not applicable to them. For example, 44% of respondents in quintile one said this in relation to meat, fish and seafood pâté compared with 23% of those in quintiles two to five and 48% said that the fresh dip question was not applicable compared with 25% of those in quintiles two to five.

²⁰ Recommended practice is that raw meat should be stored separate from ready-to-eat food and that raw meat and poultry should be stored in sealed containers at the bottom of the fridge

²¹ Recommended practice is to always wash hand before preparing food and after handling raw meat, poultry or fish

8. Comparisons between Northern Ireland and the rest of the UK

Table 8.1 Food preparation behaviour - % who reported carrying out a food safety practice, by country (Wave 3)

% reporting that they always ...	Northern Ireland	England	Wales	Scotland
Wash hands immediately after handling raw meat, poultry or fish	83%	86%	89% ^{NI}	85%
Wash hands before starting to prepare or cook food	81%	84%	86%	82%
Cook food until it is steaming hot throughout	78%	82%	86% ^{NI}	88% ^{E NI}
Wash vegetables (including salad) which are going to be eaten raw	66%	67%	66%	70%
Wash vegetables which are going to be cooked	64%	61%	60%	62%
Wash fruit which is going to be eaten raw	50%	54% ^W	47%	56% ^W
Use different chopping boards for different foods	46%	49%	49%	51%
Wash fruit which is going to be cooked	39%	42%	36%	38%
<i>Base</i>	<i>(524)</i>	<i>(1,951)</i>	<i>(503)</i>	<i>(475)</i>

Source: Q4_1 Thinking about when you are storing, preparing and cooking food, I would like you to tell me whether you do or don't do the following things at all when you are in the kitchen and if so how frequently.

Base: All respondents

NB. E / W / S / NI indicates that the result is statistically significantly higher than the result for the country indicated by the initial

- Respondents living in Northern Ireland were less likely to report that they always washed their hands immediately after handling raw meat, poultry or fish (83%) compared with those living in Wales (89%).
- They were also less likely to report cooking food until it is steaming hot throughout (78%) than those living in Wales or Scotland (86% and 88% respectively).

Table 8.2 Food preparation behaviour - % who reported carrying out a food safety practice, by country (Wave 3)

% reporting that they never ...	Northern Ireland	England	Wales	Scotland
Eat chicken or turkey if the meat is pink or has pink or red juices	93% ^W	92% ^W	87%	92% ^W
Eat burgers or sausages if the meat is pink or has pink or red juices	90% ^{EWS}	80%	80%	84%
Eat whole cuts of pork or pork chops if the meat is pink or has pink or red juices	86% ^{EWS}	77%	77%	78%
Eat red meat (e.g. beef or lamb, steak or roast meat, but not mince) if it is pink or has pink or red juices	60% ^{EW}	46%	48%	54% ^E
Eat duck if the meat is pink or has pink or red juices	57% ^{EWS}	43%	43%	42%
Store open tins in the fridge	78% ^E	70%	71%	79% ^{EW}
Wash raw meat or poultry other than chicken	50% ^E	40%	44%	52% ^{EW}
Wash raw chicken	45% ^E	35%	37%	38%
Wash raw fish or seafood	30% ^E	21%	24%	25%
<i>Base</i>	<i>(524)</i>	<i>(1,951)</i>	<i>(503)</i>	<i>(475)</i>

Source: Q4_1 Thinking about when you are storing, preparing and cooking food, I would like you to tell me whether you do or don't do the following things at all when you are in the kitchen and if so how frequently.

Base: All respondents

NB. E / W / S / NI indicates that the result is statistically significantly higher than the result for the country indicated by the initial

- Respondents living in Northern Ireland were more likely to report that they never ate chicken or turkey that was pink or had pink or red juices (93%) compared with those living in Wales (87%).
- Those in Northern Ireland were also more likely to report never eating burgers or sausages (90%), pork (86%), or duck (57%) that was pink or had pink or red juices, compared with respondents in England, Scotland or Wales, and more likely to report never eating red meat if the meat was pink or had pink or red juices (60%) than respondents in England or Wales.
- Respondents living in Northern Ireland were more likely to report that they never stored open tins in the fridge (78%), never washed raw meat or poultry other than chicken (50%), never washed raw chicken (45%), and never washed raw fish or seafood (30%) than those in England (70%, 40%, 35% and 21% respectively).

Table 8.3 Checking fridge temperature, by country (Wave 3)

% reporting that they never ...	Northern Ireland	England	Wales	Scotland
No	53%	47%	52%	45%
Yes	39%	41%	41%	44%
Someone else in the household does	5%	9% ^{W NI}	5%	9%
Net - Yes	44%	50%	46%	53% ^{NI}
I don't need to – it has an alarm if it is too hot or cold	3%	3%	2%	3%
<i>Base</i>	<i>(518)</i>	<i>(1,937)</i>	<i>(496)</i>	<i>(469)</i>

Source: Q4_9 Do you ever check your fridge temperature?

Base: All respondents with a fridge in the household

NB. E / W / S / NI indicates that the result is statistically significantly higher than the result for the country indicated by the initial

- Respondents living in Northern Ireland were less likely to report that they, or someone else in their household, checked their fridge temperature (44%) compared with respondents living in Scotland (53%). They were less likely than respondents in England (nine per cent) to report that someone else in the household checked the temperature (five per cent).
- When asked what the fridge temperature should be, respondents with a fridge living in Northern Ireland were more likely to say that the fridge temperature should be between 0°C and 5°C (62%) compared with those living in England (53%), Wales (52%) or Scotland (49%).
- Respondents in Northern Ireland were more likely to report storing certain types of food in different parts of the fridge (81%) compared with those living in England (75%).
- No statistically significant differences were observed by country in whether respondents stored raw meat in their fridge in line with recommended practice for avoiding cross contamination.

Table 8.4 Other food safety practices reported, by country (Wave 3)

% reporting ...	Northern Ireland	England	Wales	Scotland
Behaviour in line with recommended practice for use by dates [§]	72% ^{E W S}	60%	63%	64%
Reheat food no more than once	93%	90% ^W	94%	93%
Generally defrost meat and fish in the fridge	22%	31% ^{W NI}	25%	31% ^{NI}
<i>Base</i>	<i>(524)</i>	<i>(1,951)</i>	<i>(503)</i>	<i>(475)</i>

Source: Q4_19/Q4_22 Whether recommended practice (RP) followed for use by dates; Q4_25 How many times would you consider re-heating food after it was cooked for the first time?; Q4_1c Which method do you generally use to defrost frozen meat or fish?

Note: [§]Aware that use by date indicator of whether food is safe to eat, and always check use by date before cooking and preparing food

Base: All respondents

NB. E / W / S / NI indicates that the result is statistically significantly higher than the result for the country indicated by the initial

- Respondents living in Northern Ireland were more likely to report behaviours in line with recommended practice for use by dates (being aware that the use by date is an indicator of whether food is safe to eat, and always checking the use by date before cooking and preparing food) compared with those living in England, Wales or Scotland (72% compared with 60%, 63% and 64% respectively).
- Respondents in Northern Ireland were less likely to report generally defrosting meat and fish in the fridge (22%) compared with those living in England or Scotland (31% for both countries).