Older Adults Are Not Prepared to Ensure Food Safety during Extended Power Outages and Other Emergencies

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1. Introduction

Adults aged 60 years and older are more likely than any other age group to experience chronic illness, hospitalizations, and death caused by foodborne infections. Natural disasters and other events that can lead to an extended power outage can jeopardize safety of food and cause an increased risk of foodborne illness. Older adults and other consumers have a role in keeping food safe before, during, and after extended power outages. Limited research, especially at the national level, has been conducted to measure older adults’ knowledge and use of recommended food safety practices during extended power outages.

2. Purpose

To understand older adults’ food safety attitudes, knowledge, and practices with regards to food safety and emergency preparedness and response.

3. Study Method

Conducted nationally representative Web-enabled survey of adult grocery shoppers. Selected sample from KnowledgePanel®, which is designed to be representative of the U.S. population. Computed weighted frequencies for all survey questions, and for selected questions, performed chi-square test for relationship between variables of interest and various demographic variables. Number of respondents aged 60 years or older = 250

4. Results

4.1. Introduction

According to USDA, a full freezer will hold its temperature for approximately 48 hours (if it is half full) if the door remains closed.

4.2. B. Respondents’ Experience with Extended Power Outages (24 hours or more) during Past Five Years

Description of Power Outage

- 25% experienced an extended power outage during the past 5 years
- Of those who experienced an outage, 54% lived in the South and 19% lived in the Midwest
- Most outages were caused by ice/snow storms (31%), thunderstorms (27%), and hurricanes (24%)
- Most outages occurred during the summer (42%) and winter (25%) months
- 33% had power outages lasting 3 or more days

Before the Power Outage

- Many respondents reported not being very prepared for their most recent extended power outage (Figure 1)
- Female respondents were more prepared compared with male respondents (79.9% versus 54.4%; P = 0.0035)

During the Power Outage

- Nearly all respondents took at least one precaution to keep food safe (Table 1)

Table 1. Precautions Respondents Took during Extended Power Outage to Ensure Food Safety

Precaution

- Kept refrigerated and frozen foods closed as much as possible throughout power outage
- Discarded refrigerated, perishable foods
- Discarded frozen foods that had thawed
- Cooked and ate perishable foods as soon as possible
- Used a battery-powered or hand-cranked radio
- Used a battery-powered or hand-cranked flashlight
- Transported food to a house with electricity (write-in)
- Tasted the food
- Looked at the food
- Smelled the food
- Considered type of food (perishable vs. nonperishable)

4.3. C. Respondents’ Perceived Preparedness for Future Extended Power Outages

- Most respondents reported not being prepared for an extended power outage (Figure 2)
- The majority of respondents who perceived themselves to be very prepared had experienced a previous outage (51%)

Table 2. Reasons for Being Prepared/Not Prepared

Reason

- Did not take any precautions
- Stored food outside directly in snow or cold weather
- Transported food to a house with electricity (write-in)
- Put dry or block ice in refrigerator or freezer
- Discarded frozen foods that had thawed
- Respondents who had experienced a power outage that lasted 3 or more days were more likely to buy supplies and/or equipment compared with respondents who had not had an extended power outage that lasted less than 3 days (OR 7.76 versus 7.30; P = 0.0258)

4.4. D. After the Power Outage

- 76% bought supplies and/or equipment after the power outage to ensure food safety during a future power outage
- 35% bought a stock of canned or other nonperishable foods
- 40% bought bottled drinking water
- 25% bought ice or gel packs
- 13% bought coolers
- 9% bought a generator
- 5% bought an appliance thermometer for the refrigerator or freezer

4.5. E. After the Power Outage (continued)

- Respondents who had experienced a power outage that lasted 3 or more days were more likely to buy supplies and/or equipment compared with respondents who had not had an extended power outage that lasted less than 3 days (OR 7.76 versus 7.30; P = 0.0258)

Table 3. Reasons for Being Prepared/Not Prepared

Reason

- Did not take any precautions
- Stopped eating food
- Eaten food that appeared edible
- Ate food that was cold or eaten cold

4.6. F. After the Power Outage (continued)

- In case of an extended power outage, USDA recommends that consumers discard refrigerated, perishable foods 4 hours after without power.
- 77% ate food from their refrigerator during or after the power outage although it is not known whether the consumed food was perishable
- Many respondents relied on their senses (look, smell, taste, touch) to determine food safety, a potentially unsafe practice

4.7. G. After the Power Outage (continued)

- USDA recommends consumers have a 3-day supply of drinking water and nonperishable food for each household member in case of an extended power outage.
- 81% were aware of this recommendation

5. Conclusions

- Many older adults do not follow recommended practices to ensure food safety before, during, and after an extended power outage.
- Barriers to older adults not being fully prepared for extended power outages include lack of knowledge, concom, and storage space.
- Older adults would benefit from education on how to prepare for and ensure food safety during and after extended power outages.
- Public health officials and educators can use the survey findings to address gaps in older adults’ knowledge and practices and thus help to reduce foodborne illness due to extended power outages.

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More Information

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