Food Safety Knowledge and Self-Reported Practices of Chemotherapy Patients and Associated Caregivers

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Introduction

Chemotherapy patients have an increased risk of foodborne illnesses due to immunosuppression1. Indeed, cancer patients are reported to have a five-fold increased risk for development of listeriosis2. Therefore, to minimise the risk of foodborne illness it is important that cancer patients consume foods prepared and cooked at home according to food safety recommendations and avoid risk associated food products3. Furthermore, specific recommendations relating to time and temperature control of ready-to-eat (RTE) food exist to reduce the risks associated with listeriosis4,5. However, research detailing cancer patients and family caregivers knowledge and self-reported food safety practices during chemotherapy is currently lacking6.

Consequently, this study aims to establish what cancer patients and family caregivers know about food safety and how they prepare food at home. Such data will aid the development of future targeted food safety communication approaches to increase implementation of risk-reducing behaviours.

Purpose

This study aims to determine chemotherapy patients and family caregivers cognitive influences relating to food safety. Data will be used to inform targeted educational intervention strategies to decrease the risk of foodborne illness for this ‘at-risk’ consumer group.

Methods

A self-complete questionnaire (online and paper-based) was completed by chemotherapy patients (70%) and caregivers (30%) (n=172) to determine knowledge and self-reported food handling and storage practices. Statistical analyses were conducted using IBM SPSS 20, and Microsoft Office Excel 2007.

Results

A total of 172 respondents participated in the self-complete questionnaire. The majority (70%) were patients that had received chemotherapy treatment in the last three years, 30% had been responsible for preparing food for someone that had received chemotherapy, caring for a partner/spouse was most frequently reported (51%), 27% reported caring for a patient under the age of 18, with 6% caring for a child <12 months of age.

Risk associated foods

- Just over half (55%) reported awareness of food products that are recommended to be avoided during chemotherapy treatment to reduce the risk of foodborne illness.
- Respondents were most knowledgeable of avoiding undercooked eggs (37%), soft cheese (34%) and pâté (21%) (Figure 1).

Refrigeration practices

- The majority were aware of the need to allow food to cool before refrigerating (88%) and check the refrigerator is cold (73%) (Figure 2).
- Only 57% knew recommended refrigerator temperature (0–5°C).
- Only 46% reported to check refrigerator operating temperature.
- Reported ownership of thermometers was low (35%).

Cleaning practices

- The vast majority (92%) reported to ‘always’ wash hands after handling raw meat and before handling ready-to-eat food.
- Soap and hot water was reportedly ‘always’ used when washing hands by 91%.
- Only 58% reported to ‘always’ rub hands between fingers with soap into a lather for 20 seconds, and rinse with hot water.
- The majority were aware of safe hand drying practices (Figure 3).

Preparation practices

- Malpractices in relation to defrosting were determined with 72% reporting that meat may be defrosted at room.
- Majority were aware of practices that can increase cross-contamination risks (Figure 4).

Cooking practices

- Although the majority were aware of practices to ensure meat and/or poultry is safe to eat (Figure 5).
- Only 10% were aware of the recommended core temperature to ensure food safety.
- Reported usage of a meat thermometer was lacking (13%).

Significance of study

Although chemotherapy patients and family-caregivers reported awareness of key food safety practices, self-reported practices indicate that malpractices may be implemented in relation to adequate temperature control, adequate hand washing, safe cooking and ‘use-by’ dates. Such malpractices may increase the risk of foodborne illness to patients during chemotherapy treatment. Such practices need to be the focus of targeted food safety education strategies for cancer patients and family-caregivers to reduce associated risks.

References

7. Microsoft Redmond EC and Griffith CJ. Consumer perceptions of food safety risk, control and responsibility.
9. Statistilcal analyses were conducted using IBM SPSS 20...