A Patient-Centred Approach to Develop a Food Safety Intervention to Reduce Chemotherapy Patients’ Risk of Foodborne Illness

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Chemotherapy patients have an increased risk of foodborne illnesses due to immunosuppression. Cancer patients are reported to have a five-fold increased risk for development of listeriosis. To minimise the risk of foodborne illness it is important that cancer patients consume food prepared and cooked at home according to food safety recommendations and avoid risk associated food products. It is suggested that limited food safety information is available to chemotherapy patients in the UK and data on their food safety knowledge, practices and perceptions are lacking.

The aim of the project was to design, develop and evaluate a targeted food safety intervention strategy using a consumer oriented research approach.

Methods

Phase 1 – Online food-related patient information resources (n=65) were obtained from 35 of 514 National Health Service (NHS) chemotherapy providers in England, Scotland and Wales, the Department of Health and three of 38 identified UK cancer charities. Resources were reviewed for the inclusion of food safety information using a content analysis approach.

Phase 2 – In-depth interviews (n=15) were conducted with patients and family caregivers to establish the food-related experiences of patients during treatment.

Phase 3 – Self-complete questionnaires (paper-based and online) were completed (n=172) by chemotherapy patients (50%) and family caregivers (50%) to determine the knowledge, attitudes and self-reported practices. Reference to literature risk reducing behaviours were:• 7% reported that ready to eat foods should be consumed within two days of opening• 22% indicated recommended refrigeration temperature was 4°C• 23% reported self-prepared meals were reheated

Collectively, cumulative gaps exist and information varied greatly between sources.

Phase 4 – A pre and post intervention test-retest self-complete questionnaire with patients and family caregivers (n=152) was used to determine the acceptability and the potential effectiveness of the intervention on knowledge and attitudes.

Phase 5 – Food safety interventions consisted of:• A colour A5 booklet• An Interactive website• Reminder fridge magnet• Refrigerator thermometer

The intervention was determined to be acceptable and beneficial:• 100% of patients perceived an improvement in their food safety knowledge• 100% of the intervention would inform patients and caregivers of the risks associated with food preparation and handling• 95% thought intervention would reduce food poisoning among patients

Phase 6 – Food safety attitudes were statistically more positive with large effect (p<0.001, r=0.67) post-intervention (Mean=82) than pre-intervention (Mean=52).

The intervention was effective in increasing the knowledge and improving attitudes of patient and family caregivers regarding food safety during chemotherapy.

Results

Introduction

Purpose

References & Acknowledgments

Phase 1: Review of food safety information for chemotherapy patients

The majority (80%) of resources referred to the increased risk of infection during chemotherapy and 57% included one or more food safety practice (range: 1 – 43, mean: 11, possible maximum: 67). Food handler was the most frequently included aspect of food safety. Although 45% of sources, referred to washing hands before preparing food, only 22% recommended the use of soap and hot/warm water.

Phase 2: Experiences of patients and caregivers

During the interviews, food provision was determined to be an important role for caregivers.

Phase 3: Food safety awareness of patients and caregivers

Although many reported awareness of key food safety practices, self-reported practices indicate that opportunities may be missed.

Phase 4: Design and development of a food safety intervention

To enable a sense of ‘control’ for food safety, risk-reducing behaviours not only needed to be recommended, but why they are important needed to be addressed:

Phase 5: Evaluation of the food safety intervention

The intervention was determined to be acceptable and beneficial:

Phase 6: Potential effectiveness of the food safety intervention

Perceptions of risk, control and responsibility improved post-intervention (Table 1).

Table 1: Median of pre and post intervention perceptions of risk, control and responsibility (n=65)

Table 2: Pre and post intervention knowledge of key food safety practices (n=152)