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Assistance at mealtimes in hospital settings and rehabilitation units for patients (>65 years) from the perspective of patients, families and healthcare professionals: A mixed methods systematic review

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ABSTRACT

Background: Malnutrition is one of the key issues affecting the health of older people (>65 years). With an aging population the problem is expected to increase further since the prevalence of malnutrition increases with age. Studies worldwide have identified that some older patients with good appetites do not receive sufficient nourishment because of inadequate feeding assistance. Mealtime assistance can enhance nutritional intake, clinical outcomes and patient experience.
Objectives/Aim: To determine the effectiveness of meal time assistance initiatives for improving nutritional intake and nutritional status for older adult patients (>65 years) in hospital settings and rehabilitation units. The review also sought to identify and explore the perceptions and experiences of older adult patients and those involved with their care.
Design: Mixed methods systematic review.
Data sources: A search of electronic databases to identify published studies (CINAHL, MEDLINE, British Nursing Index, Cochrane Central Register of Controlled Trials, EMBASE, PsychINFO, Web of Science (1998–2015) was conducted. Relevant journals were hand-searched and reference lists from retrieved studies were reviewed. The search was restricted to English language papers. The key words used were words that described meal time assistance for adult patients in hospital units or rehabilitation settings.
Review methods: The review considered qualitative, quantitative and mixed methods studies that included interventions for mealtime assistance, observed mealtime assistance or discussed experiences of mealtime assistance with staff, patients, relatives, volunteers or stakeholders. Extraction of data was undertaken independently by two reviewers. A further two reviewers assessed the methodological quality against agreed criteria.
Findings: Twenty one publications covering 19 studies were included. Three aggregated mixed methods syntheses were developed: 1) Mealtimes should be viewed as high priority. 2a) Nursing staff, employed mealtime assistants, volunteers or relatives/visitors can help with mealtime assistance. 2b) Social interaction at mealtimes should be encouraged. 3) Communication is essential.
Conclusions: A number of initiatives were identified which can be used to support older patients (>65 years) at mealtimes in hospital settings and rehabilitation units. However, no firm conclusions can be drawn in respect to the most effective initiatives. Initiatives with merit include those that encourage social interaction. Any initiative that involves supporting the older patient (>65 years) at mealtimes is beneficial. A potential way forward would be for nurses to focus on the training and support of volunteers and relatives to deliver mealtime assistance, whilst being available at mealtimes to support patients with complex nutritional needs.

1. Introduction

Malnutrition is one of the key issues affecting the health of older people (Wilson, 2013). The World Health Organisation defines older people as those who are 65 years and older in

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developed countries (World Health Organization, 2012). Globally the number of people aged over 65 years is estimated to be over 2 billion by 2050 (United Nations, 2013). With an aging population the problem is expected to increase further since the prevalence of malnutrition increases with age (Elia, 2015). This is because changes associated with the process of ageing contribute to the risk of malnutrition for example: chronic disease, poor dentition, dysphagia, as well as a variety of psychological, lifestyle and social factors (Hickson, 2006; Mogensen and DiMaria-Ghalili, 2015).

For older adults (>65 years) admitted to hospital, the prevalence of malnutrition has been reported as being as high as 60% (Agarwal et al., 2013). This is reported to be approximately 35% higher compared to those patients less than 65 years (Russell and Elia, 2014). This is an area of concern, as it is associated with prolonged hospital stays and increased morbidity (pressure ulcers, infections and falls) and mortality, especially for those with chronic conditions (Correia et al., 2014).

For the hospitalised older adult patient with pre-existing malnutrition, further nutritional problems are often encountered due to a reduced dietary intake. Poor food intake for older patients in hospital may be due to a wide range of issues for example: the effects of acute illness, poor appetite, nausea or vomiting, “nil by mouth” orders, medication side effects, catering limitations, swallowing and/or oral problems, difficulty with vision and opening containers, the placement of food out of patients' reach, limited access to snacks, and ethnic or religious food preferences (Milne et al., 2005). An examination of the international literature has shown that some older patients with good appetites do not receive sufficient nourishment because of inadequate assistance with feeding during mealtimes (Age Concern England, 2006; Age UK, 2013; Buys et al., 2013; Francis, 2013; Robinson et al., 2002; Tsang, 2008; Westergren et al., 2001; Wong et al., 2008; Xia and McCutcheon, 2006)

Mealtime assistance is defined as receiving help from another person to eat or to complete the eating process when a meal or snack is served (Westergren et al., 2001).

A variety of initiatives have been developed to try to ensure that patients receive mealtime assistance if required. Initiatives can focus on providing patients who need it with feeding assistance by healthcare staff or volunteers (Hickson et al., 2004; Walton et al., 2008). Bradley and Rees (2003) introduced the concept of providing meals on red trays for ‘at risk’ patients. This simple food practice initiative acts as a signal to healthcare staff, that those patients should receive support in eating their food. Two further initiatives are protected mealtimes and supervised dining rooms. During protected mealtimes, unnecessary or avoidable interruptions are discouraged so that patients are able to eat undisturbed and nursing staff are available to assist with feeding (Hospital Caterers Association, 2004). Having supervised dining rooms encourages social interaction between patients and creates an environment where verbal encouragement to eat can be given by healthcare staff (Wright et al., 2006).

The background literature has identified that mealtime assistance at is an important and ongoing issue, as one way of tackling malnutrition in hospital for older patients (>65 years). Findings from previous reviews in this area have demonstrated that mealtime assistance has the potential to enhance nutritional intake, clinical outcomes, and patient experience (Green et al., 2011; Tassone et al., 2015; Wade and Flett, 2012; Weekes et al., 2009; Whitelock and Aromataris, 2013). These findings have been reported from across a wide variety of settings: two studies were conducted with hospitalised patients only (Tassone et al., 2015; Whitelock and Aromataris, 2013), three studies with patients in any healthcare/institutional environment (Green et al., 2011; Weekes et al., 2009) and one with patients from both hospital and rehabilitation settings (Wade and Flett, 2012).

All of the previous reviews have been quantitative in nature. Four of these included adults over 18 years of age (Green et al., 2011; Wade and Flett, 2012; Weekes et al., 2009; Whitelock and Aromataris, 2013) and one included patients >65 years of age (Tassone et al., 2015). Combining both quantitative and qualitative studies in the same review makes this the first mixed methods systematic review including both hospital settings and settings rehabilitation units to be conducted in this topic area for patients (>65 years). A mixed methods review is important because quantitative studies inform us about what interventions work; but we also need to be able to reveal why something works and what factors are important for the intervention to work. The protocol (Edwards et al., 2015) and full report of this systematic review (Edwards et al., 2016) have already been published and this paper provides a summary of the main points of interest.

2. Methods

2.1. Aim

This current review sought to develop an aggregated synthesis of quantitative and qualitative data that will focus only on patients (>65 years) in hospital settings and rehabilitation units with regard to assistance at mealtimes. The specific question being asked was what goes on, what works and what do patients, families and healthcare professionals think about assistance at mealtimes?

2.2. Design

A mixed methods systematic review was conducted to identify, summarise and synthesise the findings of all relevant studies that investigated both the effectiveness of the varying types of mealtime assistance provided in both hospital settings and rehabilitation units and the views of patients, health care professionals, family members and volunteers on mealtime assistance for patients (>65 years).

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist has been followed for the reporting of this review (Moher et al., 2009).

2.3. Search strategy

2.3.1. Electronic searches

The databases searched for published material are shown in Fig. 1 and an example of a full search using MEDLINE is provided in Supplementary file 1.

The European Journal of Clinical Nutrition and Journal of Clinical Nutrition were hand-searched. Reference lists from retrieved studies were reviewed to identify studies that could not be located through other search strategies. The search was restricted to English language papers.

All studies identified, were assessed for relevance based on the title and where available the abstract. When a definite decision could not be made based on the title or abstract alone, the full paper was obtained. These were assessed by two researchers against the inclusion criteria. Any disagreement was resolved by consultation with a third independent reviewer. A screening tool was developed by the reviewers to ensure consistency and equity across the screening process. The screening tool was based on the inclusion criteria (see below).

2.4. Inclusion/exclusion criteria

2.4.1. Population

Studies that included patients (>65 years) from any ethnic background in hospital settings including rehabilitation units, with