FEWER REFERRALS TO SWEDISH EMERGENCY DEPARTMENTS AMONG NURSING HOME PATIENTS WITH DEMENTIA, COMPREHENSIVE COGNITIVE DECLINE AND MULTICOMORBIDITY

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Abstract: Objectives: The objective was to describe the extent to which nursing home patients had cognitive impairments and were diagnosed with dementia. Furthermore, to describe and compare multicomorbidity, health status and drug use in the three subgroups; dementia diagnosis/not referred, dementia diagnosis/referred and no dementia diagnosis/not referred to an emergency department (ED) over a one-year period. Methods: A cross-sectional follow-up study was carried out in Sweden. RAI/MDS assessments were conducted on 719 patients in 24 nursing homes, of whom 209 were referred to EDs during a one-year period, accounting for 314 visits. This study involved an extensive examination of the population. Results: The 719 patients were reported to suffer from comprehensive cognitive impairments, which not accorded with the dementia diagnoses, they were significantly fewer. Cognitive decline or dementia diagnosis contributed to a significant decrease of referrals to EDs. Patients with dementia diagnosis/not referred had difficulties understanding others, as well as impaired vision and hearing. Patients with dementia diagnosis/referred usually understood messages. Low BMI, daily pain, multicomorbidity and high drug consumption occurred in all groups. Patients with no dementia diagnosis/not referred had significantly less multicomorbidity. Neuroleptica was significantly more prevalent among those with dementia diagnosis. Conclusion: Dementia remains undetected. Patients with cognitive decline and dementia are probably as sick as or even worse than others but may, due to low priority be undertreated or referrals avoided with the objective to provide good care in the setting. Observational studies are needed to identify what is done and could be done in referral situations.

Key words: Nursing home, dementia, cognitive impairment, referrals, emergency department.

Introduction

Elderly people are often referred to emergency departments (ED). The care provided in such departments differs from other care as the patients are in need of urgent attention, the duration of visits is usually short and decisions have to be made quickly. Kihlgren et al. (1) described a wide range of illnesses and mental states among nursing homes (NH) patients referred to an ED. More than 20% of patients admitted to an ED reported poor quality of the ED environment such as little attention to the patients' whole life situation on the part of nurses (2). According to Kihlgren et al. (3), older patients at EDs were exposed to a lack of good routines during the waiting period, e.g. unpleasant and unnecessary waiting, which gave rise to negative feelings among them. A literature review by Grief et al. (4) demonstrated gaps in knowledge among ED staff related to the nursing care of older patients. The ED milieu was described as inappropriate for meeting older patients’ needs (5).

Many older patients admitted to EDs have conditions such as infections, trauma, dehydration and polypharmacy that can cause cognitive impairment, while some have dementia. In the latter case, hospital admission can be hazardous (6). Condelius et al. (7) indicated that multimorbidity contributed to referrals to hospital, as one of the main predictors of admission was the number of medical diagnosis groups.

Lower utilization of hospital care has been described among NH patients compared to older patients cared for at home (7, 8). However, according to a Scottish study that reviewed general practitioner case notes, between 8% and 40% of NH patients referred to an ED could have been managed in the nursing home. Furthermore, 71% of the patients were returned to the NH by non-ambulance transport (9). Older patients are a vulnerable group often diagnosed as having multicomorbidity and various functional impairments resulting in complex needs (7, 10). This group is frequently transferred back and forth between the different health and social care system levels (11). There have also been great changes in the health and elder care infrastructure. The number of hospital beds was reduced by 55% between 1992 and 2003, from 58,000 to 26,000, and a further reduction to 24,000 took place in 2010 (12). The duration of each hospitalization decreased by 7.6 days, a change of almost 50% (13). The number of persons living in NHs in Sweden decreased from 118,700 in 1992 to 110,900 in 2003 (14) and to 95,000 in 2010 (15).

One frequently mentioned reason for referral to EDs is inappropriate drug use. Bergman et al. (16) assessed the quality of drug therapy by the number of prescribed drugs per NH patient and revealed that more than 70% had one or more potentially inappropriate prescriptions. In a study that included 3,705 participants from NHs and special care units for dementia
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(17), the mean number of prescribed drugs was 10.3 per patient. The proportion of individuals prescribed psychotropic drugs was 80% in NHs and 85% in special care units for dementia. According to Olsson et al. (17), anticholinergic drugs were prescribed for approximately 20% of all NH patients and a high rate of psychotropic drug use (≥80%) was reported.

Dementia is becoming a greater problem in health care globally (18), due to an increase in the number of people affected. In Sweden, the number of people suffering from dementia increased from 133,000 to 148,000 between 2000 and 2008 (14). Disorders such as dementia that cause cognitive impairment are common in long term institutional care. Mamhidir et al. (19) found that cognitive impairment was present in 67% of NH patients and Nordberg et al. (20) reported 62%. Such patients often exhibit symptoms that are difficult to interpret. Although they have the same illnesses as younger patients, their symptoms differ as they often have several illnesses, which make the symptoms and diagnosis more complex. These patients often present with acute and serious medical and psychosocial problems (10).

Patients with dementia are at risk of not receiving adequate assessment or treatment due to their relative lack of communication skills (21). These patients are doubly vulnerable, as information gaps between the NHs and the EDs concerning the patients' health status commonly occur and the clinical impact of this is not clear (22). Essential information provided to emergency department patient care was significantly increased by using a transfer form (23). In contrast, McCloskey (24) described that although organization-specific forms were used, they contributed little to the sharing of information between the NHs and EDs. Detection and diagnosis of cognitive dysfunction is critical for the quality of dementia care (25). Douzenis et al. (26) described undetected dementia as problematic among older hospital patients. Undetected cognitive impairment can lead to inappropriate care interventions and follow-ups in this group (27, 28).

Mamhidir et al. (19) found that of 719 patients living in NHs, 28% had moderate and 39% severe cognitive impairment, when assessed by the Cognitive Performance Scale (28). Dementia was diagnosed in 36%. Within this group of NH patients, 209 (29%) were referred to an ED 314 times in the course of a year (1). Questions were raised about patients with diagnosed dementia and cognitive decline, as although they received fewer referrals they are likely to have the same level of disabilities. More research is needed, since these individuals may be undetected and undertreated. This paper therefore focuses on further investigation of Kihlgren’s results (1). The aim was to describe the extent to which nursing home patients had cognitive impairments and were diagnosed with dementia. An additional aim was to describe and compare multimorbidity, health status and drug use in the following three subgroups: dementia diagnosis/not referred, dementia diagnosis/referred and no dementia diagnosis/not referred to an emergency department (ED) in the course of a year.

Materials and methods

Sample and setting

The present investigation is part of a cross sectional follow-up study, in which disabilities, resources and needs among older patients in NHs were assessed. The study was conducted in ten municipalities in a county in Sweden in the period 2000-2002 (18) and was approved by managers of each community and by the Regional Research Ethical Committee (99310-17). The county is situated in the middle of Sweden and represents NHs from both rural and urban areas. A random sample of 24 NHs with a total of 800 individuals was initially recruited. 719 elderly patients participated, which represented 16% of all NH residents. Inclusion criteria were aged 75+ years and living permanently in a community-managed NH. What the different units defined as NHs was not always clear. Most NHs had mixed living settings (76%) i.e. groups of individuals with both cognitive and functional disabilities. Others lived in group livings for persons with dementia (4%). Yet other persons resided low staffed service houses (20%) and had individual apartments. In the NH settings food for example was delivered from central kitchens while others prepared the food on site. The persons in service houses had access to a restaurant for their meals or could have them delivered. One of the NHs was defined as a group facility for patients with dementia and 21% of the persons lived in service houses i.e. and while the rest of the patients lived in mixed settings.

At the follow-up after one year the mixed settings and services houses reported a mortality of 26%, respectively and in the group living of dementia the mortality was 19%. All NHs were guaranteed regularly visits by a general practitioner once a week due to a county council agreement. Geriatricians could be connected to a NH but it was unusual since there was a shortage of that kind of specialist. Figure 1 presents the patients initially recruited, including the 81 individuals who withdrew, moved or died before the data collection started. The present study focuses on the 29% (n=209) referred to an ED over a one-year period (1).

Procedure

The management of the NHs gave informed consent to participate in the study. Verbal and written information was provided to all patients, relatives and staff members. It was explained that participation was voluntary, confidentiality was guaranteed and that the participants could withdraw from the study at any time without giving a reason. The NH managers obtained individual verbal as well as written consent from the patients and/or their relatives.

Before the start of the assessments, interested enrolled nurses, registered nurses and physiotherapists (N=150) from the 24 NHs were trained in how to use the assessment instrument by the research team. Thereafter, these care providers carried out baseline as well as follow-up assessments after one year. More detailed information about the sample size, recruitment