JAMDA 16 (2015) 715.e1–715.e5

JAMDA

journal homepage: www.jamda.com

Original Study

Physician Treatment Orders in Dutch Nursing Homes

Hylco Bouwstra MD, PhD *, Martin Smalbrugge MD, PhD, Cees M. Hertogh MD, PhD

Department of General Practice and Elderly Care Medicine, EMGO Institute for Health and Care Research VU Medical Center, Amsterdam, The Netherlands

Keywords:
Physician treatment order
advance care planning
nursing home
long-term care facility
resuscitation
palliative care

A B S T R A C T

Objectives: Physician treatment orders (PTOs) prevent burdensome unnecessary medical treatment of frail nursing home patients. The aim was to determine the prevalence of PTOs and time duration between nursing home admittance and PTO completion.
Design: Population-based, retrospective cohort study.
Setting: Nursing homes across the Netherlands.
Data Collection: Digital medical records of patients who subsequently were submitted to 14 Dutch nursing homes across The Netherlands were studied between 2010 and 2013. The prevalence's of do-resuscitate, do-not-resuscitate, life-sustaining, and palliative care PTOs and the time intervals between nursing home admittance and documentation of PTOs were measured. Information regarding demographic patient characteristics, type of nursing home ward, and mention of a discussion of PTOs with the patient or caregivers was obtained.
Results: Eighty-two percent of the nursing home patients received a PTO regarding resuscitation, life-sustaining, or palliative care treatment. Twenty-four percent of the patients received a do-resuscitation PTO, 55% received a do-not-resuscitate PTO, 44% a life-sustaining PTO, and 16% a palliative care PTO. The median duration between nursing home admittance and documentation of the first PTO was 1 day. Most nursing home patients had PTOs within 1 week after admittance.
Conclusion: A minority (18%) of Dutch nursing home patients has no documented PTOs during their nursing home stay, which could have negative effects on end-of-life care of nursing home residents.

Elderly patients admitted to a nursing home are very vulnerable and generally have a limited life expectancy.[1–4] As a consequence, careful consideration of the desirability of future medical interventions is necessary. Advance care planning (ACP) is often advocated as a means to come to decisions about future medical care.[5] ACP refers to the continuous process of the patient and the caregiver making shared decisions on future care, in the event of the patient becoming incapable of consenting to or refusing treatment or other care.[5] Several studies have shown a positive effect of ACP on end-of-life care, with fewer hospitalizations, better patient and family satisfaction, higher concordance between patient's previous preferences and treatments received, and less distress of kin.[6–8] The ultimate goal of ACP is to adjust the medical care to the preferences and life goals of the patient.[9]

Dutch elderly care physicians (formerly known as nursing home physicians), who have their principal site of practice in the nursing home, are experts in geriatric palliative care and consider ACP as a cornerstone of high-quality care for the vulnerable patient group of nursing home residents. In the Netherlands, elderly care medicine is an officially registered medical specialist, requiring a 3-year post vocational training in geriatric palliative care, geriatric rehabilitation, and medical care for patients with complex multimorbidity.[10]

Because most older people have no documented ACP before nursing home admission,[11] elderly care physicians consider it their responsibility to engage their patients, or their family caregiver in case of incapacity, in ACP discussions. The results of these discussions are documented in the patients' medical record, otherwise known as physician treatment orders (PTO). According to a professional guideline developed by the Dutch association of elderly care physicians in 1997 and updated in 2006 in collaboration with professional organizations of nurses and nurse assistants, PTOs are classified in several categories, all being adapted from the original 1990 World Health Organization definition of palliative care.[12–14] These include PTOs regarding life-sustaining treatment, including cardiopulmonary resuscitation, PTOs that focus on quality of life as the main outcome of medical care, and PTOs that focus exclusively on comfort care, allowing no place for life-prolonging effects of medical interventions. The latter two PTOs are classified as palliative PTOs. They include a

The authors declare no conflicts of interest.

* Address correspondence to Hylco Bouwstra, MD, PhD, Department of General Practice and Elderly Care Medicine, EMGO Institute for Health and Care Research VU Medical Center, PO Box 7057, 1007 MB Amsterdam, The Netherlands.
E-mail address: h.bouwstra@gmail.com (H. Bouwstra).

http://dx.doi.org/10.1016/j.jamda.2015.05.018
1525-8610/

do-not-resuscitate (DNR) order as well as a do-not-hospitalize order. For more details, see Hertogh 2010.[13] These treatment orders are to be reassessed regularly and revised if necessary, as part of the process of proactive caregiving. However, little is known about adherence to this professional guideline in nursing homes.[14] Therefore, this study aimed to assess the degree of PTO implementation in daily clinical practice of Dutch long-term care facilities, by estimating the prevalence of PTOs and time duration between admittance to a nursing home and subsequent completion of PTOs.

Methods

Study Population

We selected 7375 patients who were newly admitted to a psychogeriatric ward (dementia special care units), a somatic ward (people with complex multimorbidity and without relevant or dominant cognitive impairment), or an inpatient rehabilitation nursing home unit (geriatric rehabilitation) from August 2010 until November 2013. This study population was structurally selected using the Dutch electronic patient medical record system (Gerimedica), containing 26,329 registered in- and outpatients of 14 residential and nursing home care organizations across the Netherlands. We excluded registered patients with no medical file module in use in Gerimedica (n = 11,893), extramural patients or patients receiving hospice care (n = 1838), and patients who were admitted before the census period (n = 5223) (Figure 1). The following patient characteristics were obtained: age, sex, marital status, type of nursing home care received (psychogeriatric, somatic or rehabilitation care), length of stay until discharge, death, or census date (Table 1).

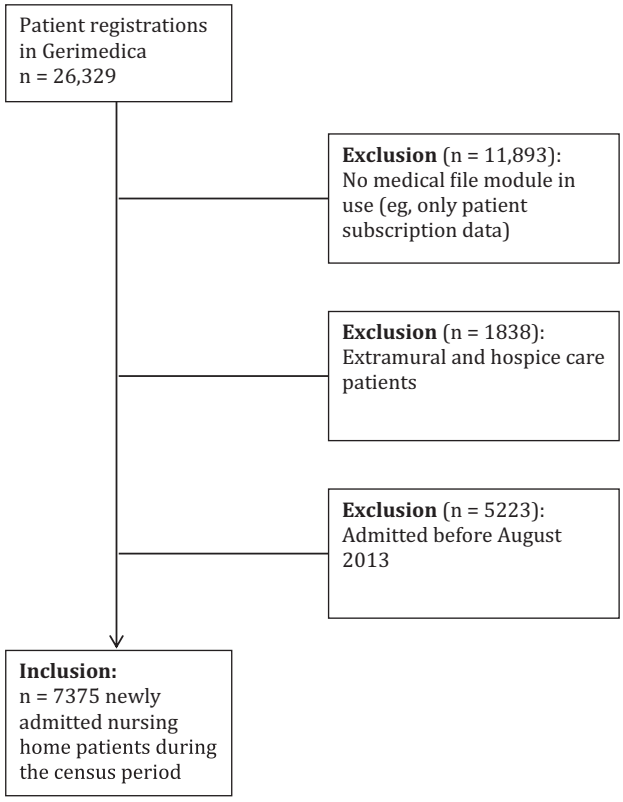

Fig. 1. Selection of study sample.

Data Collection

Data were obtained on the basis of the extant electronic patient record system, which contained the following prestructured options: (1) resuscitation or withholding of resuscitation, (2) life-sustaining PTO, (3) palliative PTO. If no prestructured options were filled in, we searched for any mention of these options in the free text comment fields. We also recorded the frequency of explicit documentation of the discussion of PTOs with the patient or representative. The number of days between nursing home admittance and subsequent completion of the physicians' orders was calculated.

Analysis

Differences in frequency of PTOs among the 3 types of nursing home wards (psychogeriatric, somatic, or rehabilitation ward) were analyzed using the χ^2 test. Differences of $P < .017$ were regarded significant (Bonferroni correction, $P = .05/3$). Differences in duration between admittance and subsequent documentation of PTOs between the nursing home wards were analyzed by the nonparametric Mann Whitney *U* test (significance level $P < .017$ Bonferroni corrected). Using backward conditional elimination, multivariate logistic regression analyses were made to determine the contribution of the demographic characteristics in explaining the prevalence of PTOs.

Results

The mean age of the study population (n = 7375) was 78.6 years. Sixty-five percent were women and close to 25% were married at the time of nursing home admittance (Table 1). Overall, the frequency of documentation of PTOs regarding resuscitation, life-sustaining treatment, and palliative care was 82%. Those patients who had no documentation of PTOs were found to be significantly younger (median age 78 years versus 81 years, $P < .0005$), and were more often married (37% compared with 33%, $P = .009$), but did not differ in gender (37% male compared with 35%, $P = .20$ of patients with documented PTOs). The percentage of documentation of PTOs was significantly lower in the rehabilitation ward compared with the psychogeriatric or somatic wards (79% versus 85% and 87%, $P < .017$) (Table 2).

PTOs Regarding Resuscitate and DNR Orders

Twenty-four percent of patients had a do-resuscitate order, 55% a DNR order, whereas the remaining patients (21%) did not have a PTO specified with regard to resuscitation. The frequency of DNR orders was 77% on the psychogeriatric ward, 73% on the somatic ward, and 44% on the rehabilitation ward. Logistic regression analysis showed that the chances of having a do-resuscitation PTO diminished with higher age and/or being admitted to a long-stay nursing home ward (either somatic or psychogeriatric), and increased when there was explicit documentation that a discussion of the PTO had taken place with the patient or care giver (Table 3). The median time span between admittance and documentation of resuscitation orders was 1 day and the interquartile range was 1–7 days. Close to 75% of all patients had a PTO regarding resuscitation within 6 weeks (Table 2).

PTOs Regarding Life-Sustaining and Palliative Treatment

Sixty percent of all patients possessed documented PTOs regarding either life-sustaining (44%) or palliative treatment (16%), as opposed to the remaining patients (41%) who possessed no such PTOs. Patients admitted to a psychogeriatric or somatic ward had the highest frequency of palliative orders (34% and 28%, respectively),