Available online at www.medicinescience.org

ORIGINAL ARTICLE

Medicine Science International Medical Journal

Medicine Science 2025;14(2):377-80

A descriptive study: Determining the reasons for admission of geriatric nursing home patients who present to the emergency department

Okkes Zortuk[1], Nese Odabas[2], Salih Denis Simsek[3]

[1]*Hatay Defne State Hospital, Department of Emergency Medicine, Hatay, Türkiye*
[2]*Ankara Yıldırım Beyazıt University, Vocational School of Health Services, Department of Public Health Nursing, Ankara, Türkiye*
[3]*Nevşehir State Hospital, Department of Emergency Medicine, Nevşehir, Türkiye*

Received 22 December 2024; Accepted 13 January 2025
Available online 31 May 2025 with doi: 10.5455/medscience.2024.12.166

Abstract

The preventive behaviors of families and individuals engaged in providing elderly care are as crucial as the curative services provided by physicians and healthcare professionals. This study aims to identify the reasons for geriatric patients' visits to the emergency department and the factors influencing these visits. In this study, a survey comprising 14 questions was administered to physicians working in secondary and tertiary care and emergency medicine clinics in Ankara. The objective was to describe the demographic data of the physicians, the characteristics of geriatric patients in their units, and the conditions of geriatric patients at the time of admission. The data obtained were then evaluated. A total of 171 physicians participated in the study, 58.5% of whom were female, and 83.6% of whom were employed at a tertiary healthcare institution. The mean number of geriatric patients presenting to the emergency department was found to be 60.5. The most common reason for admission was infectious diseases, followed by respiratory diseases. Polypharmacy was frequently observed among the patients encountered, with nutrition problems, chronic diseases, and immobility emerging as significant risk factors. It was noted that 90.1% of the patients presented to emergency services late. The results of our study indicate that families and caregivers of patients frequently fail to recognize problems on time, which results in delayed presentations. It is postulated that education directed at families and individuals who provide care for the elderly could have a substantial impact on meeting the health needs of patients.

Keywords: Geriatric, emergency, elderly care

Introduction

The findings of our study suggest that families and caregivers of patients often fail to identify issues in a timely manner, which subsequently leads to delayed presentations. It is proposed that providing education to families and individuals who provide care for the elderly could have a significant impact on meeting the health needs of patients [1]. In February 2022, the Ministry of Family and Social Security published a report indicating that there were 452 nursing homes in our country, providing care and follow-up for a total of 26,002 individuals [2]. The elderly and frail population presents a variety of significant challenges, necessitating a complex approach to their care and monitoring [3].

The geriatric population, due to their vulnerable and complex nature, represents a significant demographic in the provision of emergency health services. A study conducted in the United Kingdom revealed that 20% of patients presenting to emergency departments were from the geriatric population [4]. The impact of environmental factors and the structure of emergency services on the geriatric population is significant. Each emergency department visit and treatment process for

CITATION
Zortuk O, Odabas N, Simsek SD. A descriptive study: Determining the reasons for admission of geriatric nursing home patients who present to the emergency department. Med Science. 2025;14(2):377-80.

Corresponding Author: Okkes Zortuk, Hatay Defne State Hospital, Department of Emergency Medicine, Hatay, Türkiye
Email: o.zortuk@gmail.com

DOI: 10.5455/medscience.2024.12.166

these individuals has the potential to exacerbate conditions such as dementia and trigger outcomes like delirium [5].

A study conducted by Ukkonen and colleagues delineated the conditions most frequently observed in the geriatric population presenting to emergency departments. The most frequently observed conditions included pneumonia, weakness-fatigue, heart failure, atrial fibrillation, cystitis, falls, and urinary infections [6]. A study conducted in our country examined the incidence of emergency department visits by elderly individuals. The most prevalent disease categories among patients who were frequently monitored in the emergency department for visits lasting less than eight hours were cardiovascular diseases, gastrointestinal diseases, and respiratory system diseases. It was observed that as patients' ages increased and their waiting times in the emergency department lengthened, mortality rates also increased [7]. In this study, we aimed to identify the reasons for geriatric patients' visits to emergency departments.

Material and Methods

This study was conducted in accordance with the ethical standards set forth by the Ankara Yıldırım Beyazıt University Health ciences Ethics Committee (research code 2024-540, decision dated 16/01/2024 and decision no 01-540). This study was conducted in a prospective manner with emergency physicians working in the province of Ankara. Once the requisite permissions had been obtained, an electronic survey form prepared for the study was distributed to physicians working in relevant units. Once the consent form was approved, the survey proceeded with questions designed to collect demographic data, professional information, details about the unit in which the physician works, the frequency of encounters with geriatric patients, and the characteristics of this patient group. The study population comprised physicians (general practitioners, residents, and specialists) working in the emergency departments of secondary and tertiary healthcare institutions in Ankara. Participants working in other provinces or units, or those who did not fully complete the survey, were excluded.

A total of 15 questions were posed to the participants, with the final question comprising an assessment of six sub-factorsutilising a 5-point Likert scale. The scale ranged from 1, indicating a strong negative response, to 5, indicating a strong positive response.

Simple Size

As indicated in the Personnel Distribution Table published by the General Directorate of Management Services of the Ministry of Health, there are 1,317 physicians engaged in the field of emergency medicine and general practitioners in Ankara [8]. In order to ascertain the requisite sample size for the study, the sample size formula for a known population was employed [9]. With a 95% confidence interval, the minimum sample size was calculated to be 208 participants.

Statistical Analysis

The data obtained from the digital survey were compiled into a database and subjected to analysis using IBM SPSS version 27 (USA). The collected data were classified according to their types, with categorical data being described in terms of frequency and percentage. The distribution of numerical data was subsequently analyzed. In the case of numerical data that exhibited a normal distribution, the mean±standard deviation was employed. In the event that the data did not adhere to a normal distribution, the median and interquartile range (IQR) values were reported.

Results

The study included 171 physicians, 83.6% of whom were employed at tertiary hospitals. The mean age of the physicians was 30.16±4.21 years, with an average duration of practice of 4.58±3.74 years. The descriptive data are presented in Table 1.

Table 1. Demographic data of participants

Descriptions	
Gender, female, n, (%)	100 (58.5)
Age (mean±SD)	30.16±4.21
Secondary level goverment hospital, n, (%)	28 (16.4)
Tertiary hospitals, n, (%)	143 (83.6)
General practitioner, n, (%)	12 (7)
Resident, n, (%)	131 (76.6)
Specialist, n, (%)	28 (16.4)
Work time (years) (mean±SD)	4.58±3.74

The participants were presented with a series of questions designed to elicit descriptions of the geriatric patients they had evaluated within their respective units. The physicians who participated in the study reported an average of 60.05 geriatric patient admissions during their most recent shift, with a minimum of five admissions and a maximum of 400 admissions. The mean number of patients transferred from nursing homes was reported as 5.95 (range 0–80) geriatric patients. All patients were found to be taking a combination of three or more medications, with the most prevalent disease group being infectious diseases, accounting for 42.1% of cases. The descriptive data pertaining to the patient groups are presented in Table 2. A five-point Likert scale was employed to ascertain responses to six questions pertaining to the patients' conditions. It was observed that there was a perception among physicians that admissions for respiratory infections, urinary tract infections, and heart failure were delayed. Table 3 presents the opinions of physicians regarding geriatric patients.

DOI: 10.5455/medscience.2024.12.166

Table 2. Descriptive information of patients

Questions	
Number of geriatric patients admitted to last shift (median, IQR)	30 (45)
Last shift brought from nursing home (median, IQR)	2 (4)
Reason for application of patients , n, (%)	
Infection diseases	72 (42.1)
Respiratuary diseases	56 (32.7)
Cardiovascular diseases	20 (11.7)
Neurological diseases	18 (10.5)
Late hospital visiting, n, (%)	154 (90.1)
Insufficient follow-up of treatments, n, (%)	161 (94.2)
Primary risk factor, n, (%)	
Inadaquate family support	10 (5.8)
Nutrition problems	19 (11.1)
Cognitive problems	11 (6.4)
Falling risk	1 (0.6)
Unsafe environment	7 (4.1)
Age	19 (11.1)
Comorbid factors	11 (6.4)
Chronical diseases	65 (38)
Immobility	22 (12.9)
Mental healty	6 (3.5)
Polypharmacy (>3 drugs) n, (%)	171 (100)
Providing family information during the discharge process, n, (%)	162 (94.7)
Use of written or visual materials in informing, n, (%)	74 (43.3)

Table 3. Physicians' thoughts on geriatric patients

Questions	Answer (mean±SD)
The application period for respiratory patients over the age of 65 that you followed in the emergency department was late	3.84±0.73
The application period for the urinary tract patients over the age of 65 that I followed in the emergency department was late	4±0.72
The medication compliance of patients with heart failure over the age of 65 that I followed in the emergency department was very poor	3.83±0.78
The people who cared for the patients over the age of 65 that I followed in the emergency department were very inadequate in monitoring the physiological status of the patients (defecation, urine, blood pressure, fever, etc.)	3.84±0.78
The person who provided medical care to patients over the age of 65 who applied to the emergency department was extremely knowledgeable about the person's medical needs	2.54±0.89
Patients over the age of 65 who apply to the emergency department are brought to the emergency room on time by their caregivers in case of abuse or neglect	2.70±9.26

Discussion

The present study constitutes an observational evaluation of geriatric patients, characterized by their vulnerable physical state and the presence of chronic conditions that often result in mortality and morbidity. The most prevalent etiologies for emergency department admission included infectious diseases and respiratory tract infections. Delays in admission were frequently observed.

As projected by the World Health Organization, the geriatric patient population is increasing. This demographic shift has significant implications for the delivery of healthcare services. It is projected that the percentage of the elderly population (defined here as individuals aged 65 and above) will increase from 12% in 2015 to 22% by 2050 [10]. A similar increase will be observed in our country as well [1]. This growth will require the implementation of new adaptations in the quality of healthcare services. In particular, this will be reflected in shifts in healthcare expenditure patterns in developing countries. Geriatric emergency services occupy a pivotal position in the contemporary landscape of emergency service provision. At present, initiatives within this domain are spearheaded by centers that prioritize the distinctive characteristics and requirements of frail patients [11].

A review of the literature on geriatric patients reveals a number of characteristics that differentiate their emergency department visits from those of the general population. A study by Karamercan et al. revealed that 90% of the patients had at least one additional medical condition and were taking one or more medications. Additionally, many of the patients had a history of falls [12]. Ukkonen et al.'s study reported that the most common conditions among presenting patients were respiratory infections, urinary system infections, and trauma [6]. In accordance with the aforementioned findings, our study also revealed that infectious diseases and respiratory conditions constituted the most prevalent causes of admission. This finding is consistent with those of other studies in the literature. Furthermore, our study underscored the considerable prevalence of fall risk and comorbid conditions among the patient population.

The issue of polypharmacy is a significant global concern, particularly in the context of geriatric patients. In a study conducted by Küçükdağlı, the prevalence of polypharmacy was found to be 82.7% [13]. A further study by Öztürk and colleagues indicated that an increased medication burden would result in an elevated prevalence of various comorbid factors [14]. The findings of our study indicate that all hospitalized patients were utilizing a minimum of three medications. As has been documented in the literature, nutritional issues and cognitive impairment were prevalent among these patients. Furthermore, our study revealed that nutritional and cognitive issues were prevalent among the monitored patients.

DOI: 10.5455/medscience.2024.12.166

Nursing homes are of significant importance in the provision of care for individuals with frailty. A study in this area revealed that patients frequently require support, with 46.8% exhibiting frequent abnormalities in mental status [15]. The advent of the pandemic has precipitated a shift in this situation, with a heightened emphasis on the early identification of such conditions in vulnerable populations and the potential for fatal outcomes in cases where diagnosis is delayed [16]. Nursing homes play a pivotal role in the management of the care, healthy living, and aging of an increasingly frail population [17].

The present study examined the general problems of geriatric patients cared for by their families and those in nursing homes. Physicians reported delays in emergency department visits by geriatric patients, particularly for conditions such as respiratory infections, urinary tract infections, and heart failure.

Conclusion

The frail nature of the geriatric population, coupled with the practice of polypharmacy and the inherent variability of physiological processes, underscores the necessity for modifications in care standards. It is of the utmost importance to comprehend the specific requirements of the patient and to implement timely interventions as part of this care process. It is of the utmost importance to provide information to both families and healthcare workers involved in elderly care, particularly with regard to the early recognition of infectious diseases. This approach has the potential to reduce mortality and morbidity while promoting a healthy aging process.

Limitations

It should be noted that our study is subject to several limitations, including the fact that it is based on data from a single individual. The analysis of institutional data, when coupled with the inclusion of unit managers, allows for a more detailed examination of demographic data. However, the fact that the study was conducted with the units reached through a single province has various disadvantages in terms of interpretation across the country. Conducting the study with randomization in different provinces and across the country may improve its interpretability.

Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

The authors declare that they have received no financial support for the study.

Ethical Approval

It complies with the ethical rules of Ankara Yıldırım Beyazıt University Health Sciences Ethics Committee, research code 2024-540, decision dated 16/01/2024 and decision no 01-540.

References

1. Turkish Statistical Institute (TUİK). İstatistiklerle Yaşlılar, 2022. https://data.tuik.gov.tr/Bulten/Index?p=İstatistiklerle-Yaşlılar-2022-49667 access date 15.05.2024.
2. Republic of Turkey Ministry of Family and Social Services. Huzurevleri 26 Bin "Çınar"ın Yuvası Oldu: https://www.aile.gov.tr/haberler/huzurevleri-26-bin-cinarin-yuvasi-oldu/ access date 15.05.2024.
3. Kumlin M, Berg GV, Kvigne K, Hellesø R. Elderly patients with complex health problems in the care trajectory: a qualitative case study. BMC Health Serv Res. 2020;20:595.
4. Chenore T, Pereira Gray DJ, Forrer J, et al. Emergency hospital admissions for the elderly: insights from the Devon Predictive Model. J Public Health (Oxf). 2013;35:616-23.
5. Round A, Crabb T, Buckingham K, et al. Six month outcomes after emergency admission of elderly patients to a community or a district general hospital. Fam Pract. 2004;21:173-9.
6. Ukkonen M, Jämsen E, Zeitlin R, Pauniaho SL. Emergency department visits in older patients: a population-based survey. BMC Emerg Med. 2019;19:20.
7. Tekin YK, Demirtaş E, Nur N, Korkmaz İ. Characteristics and outcomes of older patients attending the emergency department at an academic university hospital. Cumhuriyet Tıp Dergisi. 2019;41:413-22.
8. Republic of Turkey Ministry of Health General Directorate of Management Services. Personel Dağılım Cetveli. https://yhgm.saglik.gov.tr/TR-42988/personel-dagilim-cetveli-pdc.html access date 20.05.2024.
9. Büyüköztürk Ş, Kilic E, Akgün Ö, et al. Bilimsel Araştırma Yöntemleri. 36th edition. Pegem Publishing, İstanbul, 2018;82-102.
10. World Health Organisation (WHO). Ageing and healty. https://www.who.int/news-room/fact-sheets/detail/ageing-and-health access date 220.05.2024.
11. American College of Emergency Physicians; American Geriatrics Society; Emergency Nurses Association; Society for Academic Emergency Medicine; Geriatric Emergency Department Guidelines Task Force. Geriatric emergency department guidelines. Ann Emerg Med. 2014;63:e7-25.
12. Karamercan MA, Dundar DZ, Slagman A, et al. Epidemiology of geriatric patients presenting to emergency departments in Europe: EGERS study. Eur J Emerg Med. 2023;30:117-24. Erratum in: Eur J Emerg Med. 2023;30:224.
13. Küçükdağlı P. Polypharmacy and related factors in geriatric outpatients. Eur J Geriatric Gerontol. 2019;1:56-60.
14. Öztürk E, Ganidağlı S, Öztürk ZA. Polypharmacy in the elderly: a double-edged sword. Med Records. 2023;5:255-61.
15. Banda-Arevalo JP, Salinas-Martinez R. Problems identified by geriatric evaluation at a nursing home. Salud Publica Mex. 1992;34:546-53.
16. Soysal P, Aydin AE, Isik AT. Challenges experienced by elderly people in nursing homes due to the coronavirus disease 2019 pandemic. Psychogeriatrics. 2020;20:914-5.
17. Spang L, Holmefur M, Pettersson C, et al. Experiences of close relatives of older adults in need of a nursing home: it is we who manage their fragile daily life. Health & Social Care in the Community. 2023;2023:9490086.