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Original Article

Urgent Geriatric Outpatient Clinic – Easy Access to Comprehensive Geriatric Assessment for Older Home-Dwelling Persons Living with Frailty

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SUMMARY

Background: Emergency departments (ED) are not designed to meet the complex medical and social needs of older people. An easy access Urgent Geriatric Outpatient Clinic (UrGeriC) was started in order to provide rapid and more appropriate care and assistance for frail older people struggling to manage at home.
Methods: Participants were older Finnish home-dwelling citizens who had presented themselves in August 2015 to Turku City Hospital UrGeriC (n = 76) or ED of Turku University Hospital (n = 216) and who were discharged home.
Results: UrGeriC patients were older (85.7 ± 5.4) (mean age ± SD) than ED patients (83.3 ± 5.3) ($p < .001$). Compared to ED patients, UrGeriC patients were more often female (79% vs. 61%, p = .005) and living alone (67% vs. 52%, p = .025). The proportions of patients using home care (56% in UrGeriC vs. 30% in ED, $p < .001$) and having contact with health services within previous two weeks (62% vs. 46%, respectively, p = .005) were higher in UrGeriC than in ED. To ensure safe living at home, additional help was arranged for a greater proportion of patients presenting themselves to UrGeriC than to ED (32% vs. 3%, $p > .001$). No significant differences were found in staying at home four weeks (unadjusted OR 1.69 [95% CI 0.62–4.62], p = .305; adjusted 1.42 [0.50–4.01], p = .507) or one year (unadjusted 1.53 [0.69–3.41], p = .295; adjusted 1.51 [0.65–3.50], p = .339) after discharge between UrGeriC and ED patients.
Conclusions: According to our preliminary results, UrGeriC could be a suitable way to support the home care of multimorbid geriatric patients struggling to live at home.

1. Introduction

The ageing of the population and an increased occurrence of chronic and degenerative diseases, susceptible to frequent exacerbations, make older people with frailty frequent users of emergency departments (EDs).[1,2] There is a view older people are more likely than other age groups to present at an ED with non-life threatening injuries, illnesses, and conditions.[3] This may lead to an overcrowding problem of EDs and excessive health care spending. Most of all, because EDs are not designed to meet the complex medical and social needs of older people,[1,2] they are often under-triaged[4] and when discharged from ED face further adverse health outcomes, such as ED return, hospitalization, functional decline, and death.[1–3,5,6]

Based on this background, we have started an easy access Urgent Geriatric Outpatient Clinic (UrGeriC) in May 2013 in order to provide rapid, more gerontologically attuned and appropriate care and assistance for frail older people who are acutely struggling to manage at home. The aim of UrGeriC is to diminish admissions to ED and to the hospital, and, especially, a functional decline often related to hospitalization. The main purpose of this study was to describe the procedure, and, also, patients of UrGeriC compared to those of ED. In addition, weare presenting our preliminary results concerning a place of residence or caretaking institution of patients four weeks and one year after being discharged from UrGeriC and ED.

2. Materials and methods

2.1. Participants

Participants of this study were older citizens (aged 75+) who admitted to UrGeriC in Turku City Hospital and ED in Turku University Hospital during office hours (from 8 am to 3 pm) in August 2015.

2.2. Urgent geriatric outpatient clinic for frail older people

In Turku City Hospital, Finland, UrGeriC started out in May 2013.

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It is intended for all frail older persons living in city of Turku who have health problems and are acutely struggling to manage at home. Patients in whom there is a suspicion of acute coronary syndrome, cerebrovascular incident, major abdominal complaint or major injury (suspicion of a fracture) are directed to emergency department. UrGeriC is open from Monday to Friday, and new patients are received during office hours, between 8 am and 3 pm. Patient intake to UrGeriC is based on a contact of personnel of health care, e.g. home care or emergency medical technician, or on rare occasions, contact of patient itself or next of kin. Intake to UrGeriC is usually at the same day or next day after the contact. Patient intake to UrGeriC is decided by a geriatrician or a geriatric nurse of UrGeriC. The aim of UrGeriC is to diminish admissions to ED and to the hospital. After being evaluated in UrGeriC, patient is referred to ED if necessary.

In UrGeriC, older person is experiencing CGA designed to evaluate functional ability, physical health, cognition and mental health, and socioenvironmental circumstances. In admission to UrGeriC, medical secretary receives patients and updates patient data in medical records. After that patients are interviewed by a geriatric nurse who also takes vital signs, electrocardiogram and pre-determined laboratory panel, such as CBC, creatinine, electrolytes, cardiac markers (troponin, MB-CK). During on average 4- to 6-hour visit in UrGeriC, patient's needs, such as toileting and eating, are taking care of by a geriatric nurse. The next of kin have a possibility to discuss about patient's situation and possible complaints with the geriatric nurse or a care manager. Care manager contacts the home health care in order to clarify the reason for the visit to the UrGeriC, determines managing at home and clarifies the content of home help.

After the visit to geriatric nurse, patients are discussed or reviewed and examined by an experienced geriatrician. Geriatrician is in charge of patients' care and determines examinations and tests to be done as well as immediate care, after-care and place of after-care. A medical examination focusing on neurological and cardiorespiratory distress is done. Medication of the patients are verified from medical records, prescriptions or by an interview of patients and/or relatives and assessed by an experienced geriatrician and a part-time pharmacist. The cause of the use of every drug is asked by interviewing and by taking into account the diagnosed diseases. Based on this information, the geriatrician assesses the appropriateness of each drug and proposes necessary changes. Special attention is paid to drug interactions.

Functional status of patients is examined by a physiotherapist. Firstly, patients are interviewed concerning difficulties in moving inside, in stairs and/or outside, changes in frequency and/or quantity of outdoor and other activities, falls, dizziness, use of assistive devices, and network of care and assistance. More detailed examination is made for those who have fallen in the last six months. Fear of falling is evaluated by the Falls Efficacy Scale-International[7] and possible pain by the Visual Analogy Scale.[8] Lower extremity function is assessed by Short Physical Performance Battery which consists of three components: balance (ability to stand with the feet together in the side-by-side, semi-tandem, and tandem positions), time to walk 4 meters, and time to rise from a chair and return to the seated position 5 times.[9] The timed 10-meter walk test,[10–12] Berg Balance Scale,[13] and the Timed Up and Go test[14–16] may also be used to evaluate patients' lower extremity function. Use of different measures or components of those is based on patients' level of physical performance. Furthermore, physiotherapist determines the need for assistive devices and guides patients in the use of those. Assistive devices can be delivered to the patients at the same day, if needed.

Before discharge from UrGeriC, care manager contacts the home care in order to inform them about the care plan of the patient and the extra help and/or rehabilitation needed. Care manager can arrange interval care period in a nursing home, if needed, immediately or in the near future.

2.3. Emergency department

The Turku University Hospital ED takes care of all the emergency patients of southwestern Finland. The primary health care clinic is in the same premises as the hospital emergency room. The triage nurse allocates the patients to fast track treatment line or to observation units depending on the complaint. The focus is on acute medical problems. There are no geriatrician or geriatric nurses in the University Hospital ED. After the diagnosis, the patients are discharged or admitted to the University or City Hospital. A care manager is present during office hours (from 7 am to 3 pm). In the evening, a post-discharge care team can be arranged to secure the discharge for a few days.

2.4. Measurements

The data about age, gender, living circumstances, caregivers, use of home care, waiting for a place in an institutional care, contacts with health services two weeks before presenting themselves to UrGeriC or ED, contact persons to UrGeriC or ED, reasons for presenting to UrGeric or ED, types of help arranged at home, and contacts with health services within two days after being discharged home was gathered from the medical records of UrGeriC in Turku City Hospital and Turku University Hospital ED. We also gathered data about the place of residence or caretaking institution four weeks and one year after the discharge.

2.5. Ethics

The study protocol was approved by the Ethics Committee of the Hospital District of Southwest Finland. Permission for the study was given by the Ethics Committee of University of Turku and by the City of Turku Ethics Committee on health care. An informed consent was obtained from all participants.

2.6. Statistical analyses

Differences in categorical variables between UrGeriC and ED patients were analysed by using Chi-square and Fisher exact tests. The mean ages between groups were compared with two-sample t-test.

Binary logistic regression was used to compare the difference between UrGeriC and ED and to test the associations of characteristics with the odds of staying at home instead of staying in a hospital or institutional care or being deceased four weeks and one year after the discharge. The modifying effect of age and gender on the difference between UrGeriC and ED patients was analysed with interaction effects in logistic regression analysis. All statistical analyses were performed by using the SAS System for Windows, version 9.4 (SAS Institute Inc., Cary, NC, USA).

3. Results

Altogether, 196 and 856 patients admitted to UrGeriC and ED, respectively, in August 2015. Those living elsewhere than home (9 and 44 patients, respectively) and being discharged elsewhere than home (111 and 309) were excluded from the analyses. In addition,

we excluded ED patients having an acute visit (need for emergency care) (n = 27), nurses' practice visit (e.g. catheter change, wound care treatment) (n = 18), and fast track treatment line visit (comparable to health care physician visit) (n = 242). The final sample of the study consisted of 76 UrGeriC and 216 ED patients who were living at home and were discharged home.

Our preliminary study showed that patients of UrGeriC were significantly older, more often female and living alone than patients who presented ED during office hours (Table 1). The proportions of patients using home care and having contact with health services within the previous two weeks before presenting themselves were higher in UrGeriC than in ED. In most cases, a patient presenting themselves in UrGeriC was based on the contact of a nurse; in ED, it was based on a contact of the patient themself or a next of kin. The most common reason for presenting oneself in UrGeriC was a geriatric syndrome; in ED, it was a cardiorespiratory symptom.

There was no significant difference in the discharge rate between UrGeriC and ED. After the discharge, some kind of help was arranged to a significantly greater proportion of UrGeriC patients than that of ED (Table 2).

No statistically significant differences were found in staying at home (instead of staying in hospital or institutional care or being

Table 1
Characteristics of Urgent Geriatric Outpatient Clinic (UrGeriC) (n = 76) and emergency department (ED) patients presenting ED during office hours (n = 216)

	UrGeriC patients (%)	ED patients (%)	p-value
Age[a]	85.7 ± 5.4	83.3 ± 5.3	< 0.001
Age group			0.019
75–84	45	62	
85–94	53	38	
≥ 95	3	1	
Female	79	61	0.005
Living circumstances			0.025
At home with someone	33	48	
At home alone	67	52	
Caregiver	12	7	0.235
The use of home care			< 0.001
No	43	69	
Once a day/week/month (suspension of drugs)	22	14	
Twice a day	22	9	
3–4 times a day	12	7	
Waiting for a place in an institutional care	0	0	> 0.99
Contact with health services two weeks before presenting in UrGeriC or ED			0.005
No	38	55	
To a physician of health centre, home care or private clinic	37	25	
To UrGeriC (scheduled appointments excluded)	5	0	
To ED	15	12	
To hospital	5	9	
Contact person to UrGeriC or ED			< 0.001
Patient itself or next of kin	9	50	
Nurse	37	5	
Doctor	29	11	
Emergency medical technician	25	33	
Reason for presenting in UrGeric or ED			0.011
Control visit or medical procedure	12	21	
Cardiorespiratory symptom	18	26	
Central nervous system problem	1	5	
Pain	15	13	
Infection	9	8	
Geriatric syndrome	33	14	
Fall or collapse	12	12	

[a] Values are mean ± standard deviation.

Table 2
Data of Urgent Geriatric Outpatient Clinic (UrGeriC) (n = 76) and emergency department (ED) patients presenting ED during office hours (n = 216) after being discharged home

	UrGeriC patients (%)	ED patients (%)	p-value
Discharged home	41	41	0.905
Type of help arranged at home			< 0.001
Post-discharge care team, home rehabilitation activities, domestic help and/or home care	16	3	
Other help*	16	0	
No help arranged	68	97	
Contact with health services within two days after being discharged			
Yes	3	7	0.137
Place of residence or caretaking institution four weeks after being discharged			0.652
Home	94	90	
Still at hospital or in palliative care	0	2	
Re-hospitalized	5	5	
Institutional care	0	0	
Deceased	1	3	
Place of residence or caretaking institution one year after being discharged			
Home	70	59	0.518
Institutional care	9	14	
Deceased	21	27	

* Municipal or private physiotherapy, veteran rehabilitation, balance group, services from voluntary work.

dead) four weeks (unadjusted OR 1.69 [95% CI 0.62–4.62], p = .305; adjusted 1.42 [0.50–4.01], p = .507) or one year (unadjusted 1.53 [0.69–3.41], p = .295; adjusted 1.51 [0.65–3.50], p = .339) after discharge between UrGeriC and ED patients.

We also compared UrGeriC patients with patients who presented ED outside office hours (during evenings, nights, and weekends) (n = 148) when UrGeriC is closed. The patient profiles of those presenting ED during office hours and outside office hours were very similar. Due to this, no significant differences, compared to the results shown earlier, were found (data not shown).

4. Discussion

Our main purpose was to describe the procedure of an easy access UrGeriC which has started in order to avoid unnecessary admissions to the emergency department (ED) and to the hospital, as well as functional decline often related to hospitalization. We compared a patient profile of UrGeriC to that of ED. It is obvious that UrGeriC patients were older and frailer than ED patients because of the UrGeriC's phone call-based intake of patients offered by paramedics of home health care. However, there was no significant difference between the proportion of patients discharged from UrGeriC and ED in staying at home four weeks and one year after the discharge. The finding that there was no difference in being able to stay at home at four weeks and one year might be explained by the multidimensional and multiprofessional geriatric assessment in UrGeriC designed to evaluate functional ability, physical health, cognition and mental health, and socioenvironmental circumstances. On the other hand, some ED patients may have been seriously ill or injured and required, therefore, specialized care for a longer period.

Comprehensive geriatric assessment (CGA) in EDs and geriatric emergency departments (GED) have been advocated in order to improve the quality of the emergency and acute care of older patients and to avoid adverse health outcomes when discharged from ED. The evidence of benefits for e.g. CGA interventions in frail older people visiting EDs or acute medical units is, however, weak and contradictory.[17–23] A hybridized ED and observation unit managed by experienced geriatric emergency staff has found to be only slightly, non-significantly superior, compared with ED in the acute care of older patients in Italy.[22] The benefits of Irish acute medical assessment units (AMAUs), designed to diminish the workload of acute hospitals, has not yet been evaluated.[24] However, a small survey showed that the overall experience was satisfying, as 78% of the patients and 98% of the carers rated it as excellent.[25]

In our knowledge, UrGeriC is a one-of-a-kind easy access geriatric outpatient clinic in Finland. According to this preliminary study, it seems that UrGeriC could be an appropriate way to integrate specialist geriatric services and frontline services and ensure the best possible outcomes for medically complex and frail home-dwelling older patients. In the future, we are collecting a larger sample size in order to verify these preliminary results and to look at the cost-effectiveness of UrGeriC.

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Conflicts of interest

All contributing authors declare that they have no conflicts of interest.

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