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■ CLINICAL PRACTICE

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Effectiveness of a geriatrician in the emergency department in facilitating safe admission prevention of older patients

Sally Jones and Peter Wallis

ABSTRACT – The decision to admit a frail older patient is rarely made by a geriatrician and often falls to staff in the emergency department (ED), who may not have the training to balance the risks, benefits and alternatives. We based a consultant geriatrician in the ED with the primary aim of facilitating admission prevention for older patients and this was achieved for 64% (543/848) of patients. A secondary aim was to facilitate direct admission to elderly care wards when admission was necessary, and this was achieved for 57% of admitted patients (174/305). The geriatrician was able to facilitate discharge from the ED for over half of potential 30-day readmissions seen. The overall 7-day ED re-attendance rate was 10.1%, but only 3.4% of patients were admitted with the same problem, indicating true

admission prevention rather than admission delay. In conclusion, the placement of a consultant geriatrician in the ED is effective in facilitating admission prevention for older patients.

KEY WORDS: Geriatrician, emergency department, admission prevention, frail

Introduction

Frail older patients constitute a large proportion of patients attending emergency departments (ED) in the UK, with 28,651 patients over the age of 75 attending the ED at the Heart of England Foundation Trust in 2012/13. The proportion of ED attendances resulting in an acute hospital admission rises with age,^{1,2} and yet the risks associated with hospital admission – such as falls, delirium, hospital-acquired infection and de-conditioning – are greatest in the frail elderly. Older patients and those with multiple comorbidities have longer lengths of stay than younger patients,³ thus increasing their exposure to the problems

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associated with admission. In addition, the development of acute medical units (AMU) for the assessment of medical patients over recent years has meant that frail older patients are less likely to be admitted directly from the ED to elderly care wards; instead, they are first re-assessed in the AMU. Multiple ward moves increase the likelihood of delirium in the frail older patient and should be avoided.⁴⁻⁶

Comprehensive geriatric assessment (CGA) has been shown in meta-analysis to improve the likelihood that an older person will be alive and remain in their own home after an emergency admission to hospital.⁷ CGA is a multidimensional and multidisciplinary process that assesses the medical, psychiatric, functional and social needs of frail older patients in order to provide a long-term plan for their care. In addition to standard medical review, it includes assessment of cognition, medication review and assessments of activities of daily living (ADLs) and social support, in addition to looking at many other aspects (for example nutrition, tissue viability or podiatry) as required.

Standard inpatient medical assessments may miss many of the factors that contribute to a frail older person's health, whereas units that provide multidisciplinary CGA have an increased likelihood of facilitating a patient's return home and avoiding admission to residential care or their deterioration and death.⁷ CGA is most effective if carried out by units that have expertise in the care of older people and control over the delivery of direct care.⁷ Therefore, unless there are pathways to provide CGA within the AMU, the admission of the frail elderly from the ED to the AMU for further assessment, rather than their transfer directly to specialist elderly care teams, may either delay or deny access to CGA. CGA does not have to be carried out in an inpatient setting and can be carried out in a person's home, which has also been shown to reduce mortality and improve functioning when compared with standard care.⁸

The decision to admit a frail older patient is rarely made by an elderly-care specialist and often falls to junior staff in the ED who may not have the training, experience or local knowledge of out of hospital services to balance the risks and benefits of such a decision. Therefore, a specialist senior decision maker at the 'front door' may help this process and safely facilitate admission prevention for older patients.

Following a successful pilot period, a consultant geriatrician was appointed to provide support to the ED, particularly around the decision to admit. Job planning resulted in 5.5 clinical sessions per week based in the ED. The geriatrician also provided an elderly care clinic with multidisciplinary support in the medical day hospital for patients who were discharged from the ED, on a 'rapid access' basis where necessary. The primary aim was to facilitate admission prevention of the frail elderly, with any medical, social and multidisciplinary interventions being undertaken outside of an acute hospital admission, where safe to do so. The secondary aim was to facilitate direct admission to elderly care wards for those requiring admission, rather than reassessment in the AMU, in keeping with guidelines that aim to maximise early access to the care and advice of a specialist team for frail older patients.⁹ The ED geriatrician

worked in collaboration with a previously established team of occupational and physiotherapists (the 'react team') to provide support to the ED.

Methods

Data were collected for all patients reviewed by one ED geriatrician. Owing to practical difficulties in collecting data at certain points, data were collected for all patients seen consecutively during four separate blocks each of 2 months duration, 848 patients in total, spreading the data collection throughout the year. Data collected included basic demographic information as well as outcome data, which included ED reattendances within 7 days, potential 30 day readmissions saved and level of burden to outpatient clinics. Those patients who also required input from the 'react team' were noted.

Results

Outcome data were collected for all patients seen by the ED geriatrician during four separate blocks of 2 months each. In total, there were 848 patients with a median age of 85 (range 58 to 105). If the geriatrician was asked to see younger patients (age below 65), then the presenting complaint was relevant to the specialty, for example Parkinson's disease. Female patients outnumbered male patients by a ratio of 2:1. The majority of patients (n=712, 84%) seen were recorded as living in their own home, which included those accessing carers from social services and those in warden-controlled accommodation. The remainder lived in residential care, nursing care and intermediate care or respite settings (12%, 3% and 1%, respectively).

The majority of patients (804/848, 94.8%) were deemed by the ED staff either to be in definite need of admission or to require the involvement of the ED geriatrician in the decision of whether or not to admit. A minority (44/848, 5.2%) had already been deemed suitable for discharge by the ED team, but still required ED geriatrician input, predominantly regarding follow-up planning or medication advice.

The ED geriatrician was able to facilitate the discharge of 543/848 (64%) of the patients seen and to facilitate the direct admission to elderly care wards of 174/305 (57%) of those who were admitted, compared with virtually no direct admissions to elderly care wards from the ED pre-intervention. Although a minority of the remaining patients were deliberately admitted elsewhere (eg for cardiac monitoring or orthopaedic intervention), the major limiting factor in facilitating direct admission to elderly care wards was lack of available beds within the 4-hour limit to which the ED works.

A further breakdown of the discharge and admission outcomes, including the resulting burden on outpatient clinics, is given in Table 1. There was no significant difference in age between those admitted and those discharged, with median ages of 86 and 85, respectively. Half of the patients (279/543) who were discharged by the ED geriatrician also required occupational and physiotherapy review from the 'react team',

emphasising the importance of multidisciplinary working in this age group and bringing CGA into the ED.

Potential 30-day readmissions saved

Approximately 1 in 8 patients (108/848) seen by the ED geriatrician had been discharged from hospital less than 30 days previously, 76 of these with the same problem. The geriatrician was able to facilitate discharge from ED in over half (40/76) of these potential readmissions.

7-day emergency department re-attendances

The 7-day ED re-attendance rate, including those with a different problem, for patients seen by the ED geriatrician was 10.1% (86/848). This is higher than the overall hospital average of 6.3% for the over 75 years age group, although this includes all patients of this age group regardless of problem or frailty. Only 3.4% (29/848) of patients seen by the geriatrician both re-attended and were subsequently admitted with the same problem within 7 days. Of those re-attending with the same problem, the majority had suffered falls or mental health issues, predominantly anxiety and dementia.

Case 1

Mrs X, aged 90, was seen by the ED team because of recurrent episodes of feeling shaky and pre-syncope with slurred speech, on a background of feeling increasingly sleepy and 'not herself' for several weeks. She was hypercalcaemic (3.03 mmol/l) on a background of previous postural hypotension and long-standing, but milder, hypercalcaemia (2.8 mmol/l). The ED team planned to refer her to medicine with a working diagnosis of possible transient ischemic attack (TIA). Mrs X was seen by the ED geriatrician who did not feel that she was having a TIA. After discussion with the patient's daughter, the geriatrician felt that Mrs X would be safe to go home from the ED with adjustments to polypharmacy and review in the elderly care rapid access clinic. She was seen 4 days later, in clinic, where her hypercalcaemia was further investigated and found to result from primary hyperparathyroidism. After reduction of her anti-hypertensives, diuretics and opiate analgesia, she felt completely back to normal. Mrs X has since been discharged from elderly care follow up and has not had any further unplanned or emergency attendances to date (after 6 months).

Case 2

Mrs Y, aged 86, was seen by the ED team after her nursing home noted a single episode of finding dark-coloured vomitus on her night clothes. This was on a background of advanced dementia and frailty, having reached the stage of her life when she was bedbound, doubly incontinent and unable to communicate verbally. The ED team had referred her to the medical team with a working diagnosis of possible haemetemesis and she was awaiting

Table 1. Discharge and admission outcomes.

	Number of patients
Discharged	543
Discharged with no follow up	326
Discharged to intermediate care	9
Discharged to MDH	8
Discharged to respite	9
Discharged with rapid access clinic in MDH	127
Discharged with TIA clinic	2
Discharged with Parkinson's clinic	9
Discharged with falls clinic	27
Discharged with psychogeriatric clinic	10
Discharged with other clinic	16
Admitted	305
Admitted directly to elderly care	174
Admitted to medicine	110
Admitted to surgery or orthopaedics	21
Total	848

MDH = medical day hospital; TIA = transient ischemic attack.

a medical bed. They asked the ED geriatrician for advice in the interim.

Mrs Y was seen by the ED geriatrician who ensured that there were no signs of significant bleeding, acute illness or other reversible issues, and that she was comfortable, both eating and drinking within the ED without further concern. The geriatrician had a discussion with the patient's daughter about the benefits vs burdens of hospital admission and invasive procedures such as oesophagogastroduodenoscopy (OGD) at this stage in her mother's life, reassuring her that her mother currently appeared to be stable. After ensuring that both the patient's daughter and the nursing-home staff were in agreement and aware of the risk of further vomiting, Mrs Y was discharged back to her nursing home from the ED and her GP was informed of events. She has not had any further unplanned or emergency attendances to date (4 months).

Discussion

A geriatrician who is based in ED can facilitate admission prevention, discharging 64% (543/848) of patients seen in this study equating to approximately 68 prevented admissions per month on a job plan of 5.5 sessions per week in ED. What is it about this service, over and above ED and acute medical input, that allows this? First and intuitively, the presence of a senior decision maker of any specialty is likely to help prevent admission, giving support and advice to junior medical staff. This is not unique to geriatricians and is likely to be true of every specialty. Second, many of the discharges take considerable time and interagency discussion, which is difficult for the ED team to deliver given their patient burden and time constraints. The geriatrician is able to focus the same time on fewer patients. In addition,

elderly care physicians are used to managing clinical uncertainty, balancing and communicating risk in a way that more junior medical staff find difficult. Having the facility to follow the patient up helps provide confidence in the discharge plan, as does a greater understanding of, and access to community, support services. Geriatricians are also more experienced with issues such as mental capacity and carer strain. Third, the timeliness of the decision to discharge is often crucial. An acute physician in AMU may make exactly the same medical assessment and decision, but this will be several hours further into the patient journey when patient and carer expectation may have changed, social support packages cancelled for the day and access to community 'admission prevention beds' and emergency social care is more difficult as the patient has already entered the hospital.

The 7-day ED reattendance rate of 10.1% (which includes those presenting with a different problem) is higher than the overall hospital reattendance rate of 6.3% of the over-75 years age group. This is not unexpected given that the overall figure includes those attending with minor injuries and those with no markers of frailty, whereas the geriatrician focussed on those with more complex presenting complaints and with frailty. In addition, although we did not specifically collect these data, since the geriatrician sees the frailer patients who are being considered for admission, we assume that the majority of similar patients who do not see a geriatrician are admitted, perhaps unnecessarily, but which would be reflected in lower 7-day re-attendance rates. Reassuringly, only 3.4% of patients seen by the geriatrician were admitted with the same problem in the subsequent 7 days, showing that the ED geriatrician achieves genuine admission prevention rather than simply admission delay.

Facilitating direct admission to elderly care wards was not the primary aim of the ED geriatrician, but nevertheless this was achieved for 174 of the 305 patients admitted. A lack of available beds within the 4-hour ED target prevented more patients from achieving direct admission; there is a wider debate regarding whether trusts should be delivering outcome-based or target-based services as sometimes the two may conflict.

Future service development

There is significant potential for the future development of this service. These results were achieved by providing 5.5 sessions per week of consultant time in the ED. Expanding the service to 10 sessions would be likely to provide additional benefit in terms of admission prevention, particularly if we could match the timing of geriatrician availability to the peak times of presentation of elderly patients to the ED. There are also opportunities for enhancing education regarding the care of older patients within ED and also to develop training posts in this emerging aspect of geriatric medicine. We are developing a rapid access psycho-geriatric clinic in our day hospital, reflecting the fact that mental

health issues in the elderly, such as dementia and anxiety, cause considerable carer strain and unplanned emergency attendances. There is also potential to develop ambulatory care pathways within the day hospital for frail patients who require sub-acute multidisciplinary assessment.

Conclusion

A consultant geriatrician who is based in ED is effective in facilitating safe admission prevention for the older patient. Moreover, this intervention can also substantially reduce the 30-day readmission rate for older patients who have recently been discharged from hospital. This service development required expansion of outpatient clinic services, pre-dominantly within the elderly-care day hospital rapid access service, with approximately one-third of patients in this cohort discharged from the ED requiring outpatient follow up.

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