Characteristics and Outcomes of Older Patients Attending an Acute Medical Assessment Unit

Abstract:
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Abstract
The care of older persons accounts for an increasing proportion of the unscheduled care workload for acute hospitals. The development of acute medical assessment units (AMAU) has provided an alternative model for acute unscheduled care for all medical patients. Screening instruments have been developed to capture the higher levels of clinical complexity and medical comorbidities that older patients present with. The aim of this study was to report on the characteristics and outcomes for older patients reviewed in the AMAU of a tertiary referral university teaching hospital. Data on 3501 patients attending the unit over one year was prospectively collected and analysis undertaken of the clinical characteristics and outcomes for older patients reviewed. Older patients represented over one third (1066/3071, 35%) of those attending AMAU, and had an admission rate of nearly twice that of younger patients (60.5% vs 32%), though less than one third underwent risk assessment and intervention in all older patients in the acute setting. The majority of those aged 65 and older were seen by a senior clinician within one hour of their admission and discharge from the unit within 6 hours of arrival. The report recognised that older patients account for a large proportion acute hospital attendances and admissions and taking this into account it was recommended that a large number of consultants working in AMAUs should be consultant geriatricians. Further recommendations were made to enhance care for older patients specifically including the development of initiatives around the most common presentations in this patient group, appropriate and early MDT involvement and improved communication between the hospital and community care.

There has been a rapid expansion of AMAUs throughout Ireland since the AMP report was released. To date over half of consultants appointed to these units have been geriatricians. The demographics of the South Dublin population, a large part of the Tallaght Hospital catchment area, has changed in recent years with the number of those aged 65 and older increasing by 19.35% of admissions to the hospital. By 2013 13.85% of attendances and 25.02% of those admitted were aged 65 and older. The AMAU was opened in April 2010 to help facilitate discharge of suitable patients. To help facilitate discharge of suitable patients obstructive airways disease care protocols have been implemented also, with support from nurse specialists available intervention in all older patients in the acute setting. The majority of those aged 65 and older present with chest pain, as generally unwell. Despite being recommended in all older patients, only 314/1067 (29.4%) of older AMAU patients had a TRST assessment completed in ED triage. Of these, 196/314, 62.4% were identified as being "at-risk" of an adverse outcome. The mean time from arrival at AMAU to clinician assessment was 18 minutes in the 990 patients in which it was recorded. 96.1% were seen reviewed within the one-hour target time. Almost two-thirds of older patients presenting to the AMAU over a one year period.

Methods
Data on all patients attending the AMAU of a tertiary referral university teaching hospital from January to December 2013 was prospectively collected using symphonyfi electronic data systems. Information on demographics, patient experience times, and details of the presentation and discharge outcomes were retrieved and analysed. Clinical complexity and urgency was assessed examining the Manchester Triage System categories (MTS) and triage risk screening tool (TRST) scores on patients at presentation. The MTS is a triage classification system scored from 1-5, where category one patients require immediate care, and category five patients are non-urgent.

Results
A total of 3071 patients were assessed in AMAU in 2013 and one third (1066/3071, 34.7%) of these were aged 65 and older. The majority of these patients were referred directly from ED triage (2068/3071, 67.9%) where they had either severe medical conditions or were too unwell to be safely discharged by their younger colleagues. Older patients presented more acutely unwell with 404/1067, (37.9%) vs 497/2005, (24.7%) categorized as Manchester triage category 1 and 2 on presentation. The most common presenting complaint, as recorded at triage, was breathing difficulty (316/1067, 29.6%) followed by chest pain (180/1067, 16.8%). Further common presenting complaints recorded included the collapse (71/1067, 6%), dizziness (390/1067, 3.6%) and confusion (32/1067, 2.9%). 6.4% (68/1067) were recorded presenting as "at-risk" of an adverse outcome. The most common discharge diagnosis of older patients presenting was hospital admission in which it was recorded. 96.1% were seen reviewed within the one-hour target time. Almost two-thirds of older patients (60.5%) were discharged from the AMAU, either through admission to a hospital ward or discharge home, within the 6-hour period. Their admission rate (64/1067, 6.5%) was double that of younger patients. Many older patients discharged home had follow-up arranged in the daily (Mon-Fri) AMAU review clinic (174/1067, 16.3%), or the age-related day hospital (87/1067, 8.4%).

Discussion
Older patients account for a large proportion of activity in AMAUs (35%) relative to ED activity (approximately 16%). This proportion is likely to continue to increase, as the ageing population of the catchment area continues to grow. Older patients are more likely to be admitted than younger patients and though less than one third underwent risk assessment and intervention in all older patients in the acute setting. The majority of those aged 65 and older were seen by a senior clinician within one hour of AMAU attendance, as recommended in the AMP Report. A number of case milestone bundles have been developed for common age-related clinical presentations (falls, cognitive impairment, delirium, transient loss of consciousness). Existing age-attuned transient ischaemic attack/ stroke, chest pain, and chronic obstructive airways disease care protocols have been implemented also, with support from nurse specialists available to help facilitate discharge of suitable patients.
60.5% of older patients left the department (Discharged home or admitted to a ward) within 6 hours. While this is a reasonable performance a number of factors were noted which necessitate patients remaining in the department for longer than six hours. Patients referred after processing through the traditional route of ED doctor review are already in the system for several hours ahead of assessment in AMAU, and therefore may not meet the target time. These are frequently patients which ED staff would identify as potentially benefiting from further medical review after triage processing. Other factors which limit timely care are challenges in accessing inpatient beds and certain critical diagnostic tests in a timely fashion. The admission rate for older patients is 60%, compared with an overall admission rate of 41.3% and an admission rate of 32.18% for those aged less than 65 years. Given the degree of medical complexity, early discharge for older patients is not always appropriate. However, this admission rate is considerably lower than that for older patients referred to medical teams on-call before the AMAU was established. At that time 97.3% of medically referred older patients were admitted to hospital. A geriatrically-attuned AMAU is of great benefit to all older patients and Ireland has been unique in its recommendation that a large proportion of AMAU consultants be qualified geriatricians. Those patients who are likely to remain in hospital for 72 hours or less remain under the care of the Acute Medical team on the adjacent short stay unit. There is a consultant geriatrician working in the unit along with a designated multidisciplinary team. This allows specialised geriatric care to be provided from the time of admission, something previously not always possible through the traditional admission route under a medical team on call through ED. AMAU review clinics operate five days a week in order to help reduce admission rates and facilitate early discharge of patients. There is a geriatrician led clinic twice weekly and older patients with specific needs are selected to attend on these days. The AMAU can also refer patients directly to outpatient clinics and services, including the Age Related Day Hospital.

In the future, it would be of benefit to look at individual characteristics of older patients and to do deeper clinical phenotyping. It has been shown that cognitive and functional status have substantial impact on patient outcomes, as has the severity of acute illness, and pre-morbid frailty. A number of clinical screening instruments which take these factors into account are currently being developed implemented via the symphony electronic data system for the AMAU and ED setting. These screening instruments will be completed for all patients aged 70 and older. They will assess baseline functional status, polypharmacy, co-morbid illness, a history of dementia, and the acute illness severity and will direct the need for comprehensive geriatric assessment and onward referral for assessment by relevant allied healthcare professionals. Education, training, and resourcing are important factors in ensuring the successful implementation of such screening instruments, and from discussion with nursing staff are the main reasons why less than a third of older patients reviewed in our study had a TRST completed. As AMAUs evolve they have enormous potential to provide enhanced gerontologically-attuned medical care to increasing proportions of frail older patients presenting to the acute setting.

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