New horizons: urgent care for older people with frailty

Key words:

Frailty, Comprehensive Geriatric Assessment, Emergency, education & training, systems

Key messages:

1. Urgent care encompasses a wide range of settings from the ED through to the acute admissions unit (first 72 hours); patterns of attendance, admission and outcomes for frail older people in these settings is a global concern.

2. The systems and processes required to optimally assess and manage frail older people in urgent care settings differ according to the nature of the environment.

3. Robustly identifying patients who are frail in an urgent care setting is possible, and now the focus needs to be on ensuring an evidence based response is implemented (based upon Comprehensive Geriatric Assessment).

4. Educating the clinical workforce within urgent care on the specific needs and considerations around frail older people is another key to improving outcomes.

5. Collaboration between geriatric and emergency medicine, through inter-professional working, clinical leadership and educational programs can all contribute to further developing systems to provide better care for frail older people.

What is urgent care?

For a topic that attracts so much interest from policy-makers, commissioners, providers and society at large, it is surprisingly difficult to find a single, clear definition of urgent care.

Most commonly it is used to refer to the process of seeking unplanned (non-elective) care from the ambulance service (some including medical staff (e.g. France), others trained paramedics), in emergency departments, or in primary care settings (e.g. general practices or urgent care centres). Changes in treatments available leading to streaming direct to interventions (e.g. coronary angioplasty), as well as efforts to divert patients away from secondary care, have led to a complex system, sometime referred to as a '[wicked problem](#)'.

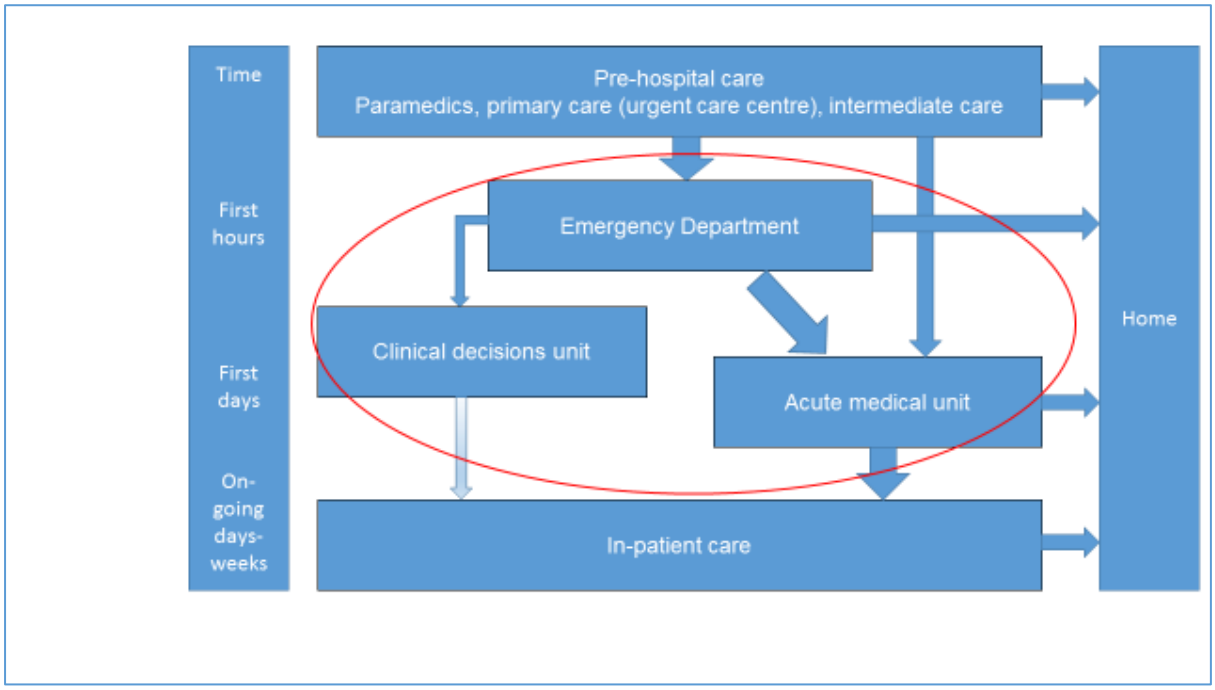
Whilst traditionally urgent care might have been associated with acute severe life threatening conditions (trauma, acute asthma, myocardial infarction etc), it is increasingly characterised by user defined needs, often sub-acute or non-urgent as adjudged by the traditional medical model of care. *'Urgent and emergency health needs are those that the patient perceives require a response on the same day that they arise. The judgement of urgent and emergency is made by the patient and not by the clinician'* [1].

Given that it is patients who decide when they call an ambulance or present to the emergency department, and the paucity of evidence for a wide range of pre-presentation diversionary schemes that attempt to 'curtail' or influence this behaviour [2], it might be that a better approach to the issue is to ensure that urgent care responses (wherever and however configured) are capable of responding to the 'democratic will of the people'!

For many older people - in the UK at least - the Emergency Department is the main portal of entry to urgent care. In many cases, the older person's urgent care needs can be quickly assessed and managed with a short period of time (the 4-hour standard); in the UK, about one-third of people aged 85+ accessing EDs are able to return home directly. But for many others, a more detailed assessment and management plan is required, delivered in either observation wards in the ED (typically for people with an anticipated stay of less than 24 hours; variously termed Clinical Decision Units, Emergency Decision Units and other such acronyms) or an Acute Medical Unit (for post-ED management of medical patients initially for up to 72 hours). In many countries medical staffing for these units is increasingly provided by the specialty of acute medicine - acute physicians trained in acute assessment of a wide range of conditions [3].

In this article, we will focus upon care delivered in Emergency Departments and Acute Medical Units, covering the first 72 hours of an older person with frailty's contact with an acute hospital (Figure 1).

Figure 1 Schematic representation of urgent care pathways with area of focus highlighted in red



The current situation in urgent care

The emergency department

In the United Kingdom (UK) and throughout much of the Western world, there has been an increase in Emergency Department (ED) attendances in older people, which is projected to continue [4, 5]. Frail older people remain one of the most vulnerable groups: their attendance rates are higher and once in the ED, their conversion rates to an inpatient admission are higher [5].

Older people often typically present atypically – that is to say that the classic textbook features of a given condition may not be present [6]. These atypical or non-specific presentations are usually related to complex interactions between multiple comorbidities (for example, osteoarthritis related pain preventing the development of heart failure associated exertional dyspnoea), cognitive impairment (reduced ability to communicate or in the case of delirium, reduced arousal or consciousness) and concomitant functional decline (making falls and immobility much more common in the face of apparently innocuous illness).

Traditional emergency medicine facilities, staff training, and behaviours have tended to focus upon clinically urgent scenarios, creating a potential mis-match between the emergency department response and the nature of the population that they are increasingly facing. Efforts to address this have predominantly focussed upon screening to identify a high risk cohort and then offering additional holistic interventions, typically assessing older people at risk in the ED [7-10], and supporting them in their transition home. Such interventions have been hampered by the absence of a screening tool that universally acceptable with robust predictive properties [11-13], and interventions that have had limited clinical or economic benefit [10, 14, 15].

But the ED is a key component of the health and social care system, responsible for the initial assessment, which strongly influences the subsequent management, and determining 'disposition' (admission vs. discharge) [16]. Predominantly in North America, there has been some enthusiasm for 'elder friendly emergency departments' – separate EDs dedicated to the care of older people. These separate elder friendly EDs have not been evaluated, and so their impact of outcomes is uncertain, but it is hard to imagine that duplicating EDs for such a large and growing population will be feasible or sustainable in the long term. Others have responded with a range of design orientated [17] or education and training initiatives [18-21] to enhance emergency department teams' capacity and competence to respond to the needs of older people. Finally, a range of service initiatives have been evaluated (predominantly from the service perspective), that embed geriatric teams in the ED context, delivering both direct clinical care in addition to 'standard' ED services, and also supporting ED staff through education, training and role modelling [22-25]. Whilst some of these evaluations appear to show promise, the overall evidence is limited [15, 26].

The acute medical unit

Reflecting the situation in the ED, acute medical units are also seeing a growing population of older patients with increasing frailty as part of their daily routine. Whilst acute physicians are well-trained in acute medical care, and have a more in-depth understanding of medicine than their ED counterparts (whose training encompasses a wide range of specialities other than medicine), there has not traditionally been a great focus on geriatric competencies[*]. However, this is changing, and in the UK at least, trainees in acute medicine have between 5-10% of their training dedicated to geriatric medicine, alongside frequent daily exposure to the care of older people with frailty in their clinical practice.

[*] http://www.jrcptb.org.uk/specialities/acute-medicine

Yet even in the United Kingdom, where acute medical units were first initiated and the specialty of acute medicine is well-established, outcomes for older people attending and then being discharged from acute medical units remain poor: in one series 76% had one or more adverse outcomes (death institutionalisation, readmission, increase in dependency or decline in mental well-being or quality of life) over the three months following discharge from an acute medical unit [27].

In the acute medical unit context, there is evidence that frailty units that attempt to deliver CGA can improve patient outcomes [28-31] although many of the RCTs are from outside of Europe and many are now quite dated. However, more recent controlled evaluations appear to support the findings in the RCT literature [32], as does national guidance such as the Silver Book [16] and the Royal College of Physicians' Acute Care Toolkit [33]. Yet provision is variable as evidenced by the 2014-15 NHS benchmarking report on urgent care for older people– less than half of hospitals surveyed offered some form of specific frailty care in the first 72 hours of an older person's acute hospital stay[†]. This has led to the development of large scale quality improvement projects[‡§] to try and address the 'know-do-gap' [34].

Evidence based solutions

A recent report noted: 'although there is a large body of evidence on relevant [urgent care] interventions, much of it is weak, with only very small numbers of randomised controlled trials identified. Evidence is dominated by single-site studies, many of which were uncontrolled' [15].

However there is evidence about the management of older people, mainly derived from acute hospital settings. This evidence base points towards Comprehensive Geriatric Assessment (CGA) being more effective than usual care for older people, many of whom had what would now be recognised as frailty [29, 30, 35]. Comprehensive Geriatric Assessment is defined as 'a multidimensional, interdisciplinary diagnostic process to determine the medical, psychological, and functional capabilities of an older person in order to develop a coordinated and integrated plan for treatment and long-term follow-up' [36]. CGA improves outcomes for older people in various settings, including reduced mortality or deterioration (odds ratio 0.76), improved cognition, improved quality of life, reduced length of stay, reduced rates of long term care use (odds ratio 0.78) and reduced costs [35, 37, 38]. Whilst integrating standard medical diagnostic evaluation, CGA emphasises problem solving, functional status, and prognosis with the aim of

[†] http://www.nhsbenchmarking.nhs.uk/news/view-article.php?id=149
[‡] http://www.frailsafe.org.uk/
[§] http://www.acutefrailtynetwork.org.uk/

restoring independence and alleviating distress [39, 40]. Typically, CGA involves a team undertaking a multidimensional assessment which should include:

- Diagnoses (there will usually be multiple interacting comorbidities with associated polypharmacy)
- Physical function (activities of daily living)
- Psychological function (especially confusion and mood)
- Environment in which the individual functions
- Social support networks present or required to maintain on-going function

The team should work within a flattened hierarchy which facilitates mutual trust and encourages constructive challenge. Typically, CGA involves a team of people from various disciplines (medicine, physiotherapy, occupational therapy, and nursing) or a combination thereof working towards a shared common goal using standardised assessment tools, pathways and documentation.

Whilst this evidence base is somewhat dated, it does provide a useful structure to organise the care of older people in modern health care systems. Fundamentally, it shifts the focus away from a predominantly medical perspective, and towards a more holistic patient centred perspective.

Structure, process and outcomes

If CGA is accepted as an organising framework that provides the template for structuring urgent care for older people with frailty, how does this lead to improved outcomes?

Structure

In the Donabedian model, structure includes the physical facility, equipment, and human resources, as well as organisational characteristics such as staff training and payment methods.

Facilities, equipment and staffing

The fundamental decision here is whether to render existing and new facilities 'frail-friendly' or to develop separate dedicated facilities for older people with frailty. Firstly, there are currently insufficiently robust tools to distinguish frail from non-frail older people, remembering that the ED attenders are initially undifferentiated and might include anything from acute surgical issues through to sub-acute delirium. Secondly, the needs of older people with frailty will require many, if not all of the facilities of EDs, as well as age-attuned response based upon the principles of CGA. Thirdly, there is a global challenge in recruiting both emergency and geriatric service staff, so it is difficult to see how dedicated geriatric EDs can be feasible or sustainable. This leaves frail friendly EDs,

reflected in both the design of new builds and adaptation of existing departments[**††‡‡] (Table 1).

[**] http://dementia.stir.ac.uk/design/virtual-environments/virtual-care-home

[††] http://www.kingsfund.org.uk/projects/enhancing-healing-environment/ehe-design-dementia

[‡‡] http://em3.org.uk/latest/28/9/2015/designing-the-uks-first-older-friendly-emergency-department.

Table 1 Components of a frail friendly ED

Environmental adaptations	Non-glare lighting Access to visual and hearing aids (e.g. portable amplifiers), large print information, clear signage Non-skid flooring and hand rails Less sensory chaos: fewer beeping machines, reduced background noise Pressure relieving mattresses and more pillows and padding Calmer environment with embedded culture of respectful approach to older people
Screening and referral	Specialist nurse involvement with the use of screening tools for geriatric syndromes such as delirium, falls, immobility, polypharmacy Access to rapid referral for specialist clinics Pharmacist in department for medicines reconciliation
Improved Transitions	Links with primary care Rapid access to social work Multidisciplinary team based in the ED Telephone follow up system Geriatric follow up clinic
Staff Education	Specialist training programmes for staff working in the Emergency Department relating to geriatric patients and their differences in the emergency setting. Geriatric Emergency Medicine champions based in the department to promote gold standard care and lead by example

For acute medical services, there are a different set of arguments. Firstly, those older people accessing AMUs will usually have been differentiated – either by their primary care practitioner or the ED – this affords an opportunity to identify a more homogenous cohort of mainly medical patients, who can be further identified as frail or not frail during the triage assessment. This need not be an onerous procedure, and might only take 1 minute (a description of establishing the process of embedding frailty identification in urgent care settings is included as an appendix). Secondly, depending upon the size of the service, it may well be feasible to have dedicated areas or zones that focus upon the care of older people with frailty. Such facilities can drive better care processes through developing dedicated teams that develops mutual trust and understanding. It is important that dedicated frailty units do not become exclusive, but also recognise the needs of older people with frailty in other areas of the acute medical unit. This might be addressed through liaison, but the concern is that the evidence for efficacy is limited [41, 42]. This means that additional education and training of acute medical teams may be required.

Education and training

There is growing momentum around education and training for emergency departments – but this assumes that ED teams are 'the problem' [18, 20]. More recent curriculae have also asked geriatric teams to develop the competencies required to adequately care for older people in the ED setting [21]. This movement of Geriatric Emergency Medicine (GEM) has the potential to blur professional boundaries and encourage both disciplines to develop shared competencies designed to improve patient outcomes. The GEM movement is gathering pace in Europe, Australia and North America.

Payment and tariff

At least in England, EDs would be paid the same tariff for managing an older person who is physiologically robust attending with a fall and wrist fracture, as they would be paid for managing the same presentation in a frail older person with cognitive impairment, concomitant heart failure, deteriorating mobility and limited social support – for whom a more complex response will be required. Whilst it is unlikely that the financial disincentives directly influence clinical practice, the global impact in terms of resource allocation is likely to be considerable. If the ED does not have access to the funding for training, teams and on-going services required to manage more complex frail older people, they will find themselves resorting to the 'safest' and perhaps easiest response of admission. This may not always be the optimal decision for the patient, potentially denying some of the most vulnerable older people access to care at home – which may improve their outcomes [43].

Processes

The process of care include diagnosis, treatment, preventive care, and patient education and may be expanded to include how care is delivered, or interpersonal processes. Beyond the high level matrix of multidimensional assessment, the CGA literature is relatively sparse on detail about the process of care. This can make it difficult for individuals to appreciate the details that make CGA different from standard medical care for older people. We highlight here some of the key aspects relating to the process of care that are essential in order to deliver CGA.

Communication

A key aspect of caring well for older people is communication. This involves the specific details of communicating with people with sensory and/or cognitive impairment (eliminating extraneous sources of noise; slow not shouting; good eye contact to allow lip-reading; using questions in plain language).

It also includes communication with relatives or carers (who may also experience communication barriers) and doing so through a lens of function (the specific symptoms of disease may well not be present, but can be inferred from changes in function or behaviour).

Often there will be existing information on past medical history, medications and so on available in accompanying correspondence or computer records. Ascertaining this information ahead of the discussion with the patient/carers allows time to be focussed on eliciting that information that helps move the diagnosis and management forwards, rather than repeating or duplicating.

A key feature of CGA is communication between professionals or between settings; for example, standardised transfer forms with essential health information (i.e. reason for transfer and tests requested; resuscitation status; medication list and allergies; health problem list; contact information) in patients who are resident in nursing homes have should improve the flow of information between the home and the ED [44]. Similarly when an individual is transferred or discharged from the acute care, effective communication with other health care providers is essential.

A cornerstone of Comprehensive Geriatric Assessment is interdisciplinary communication and coordination within the team. This has been traditionally been delivered using Multidisciplinary Team (MDT) meetings – typically on a weekly or occasionally daily basis. Clearly this frequency is not well-adapted to the acute care setting, so alternative mechanisms are necessary. In some settings, it might be possible to bring the team together for a rapid MDT discussion about patients – for example in 'observation units'; such meetings should be at a fixed time every day and for a fixed duration so that

expectations for attendance and duration are clear to all team members. On average, each patient discussion should be for no more than 1 minute, and it might be helpful to structure the discussion using the domains of Comprehensive Geriatric Assessment – physical/medical issues; functional/mobility issues; cognition/mood; social support networks and environment (home setting). For an example see here: https://vimeo.com/132073531.

Other key competencies which can be used as 'tracer conditions' to test the processes of care against agree standards include managing confusion, falls, end of life care and polypharmacy; more details can be found in national guidelines [16].

Outcomes

Outcome reflects the effects of healthcare on patients, including changes to health status, as well as patient satisfaction and health-related quality of life. Patient reported outcomes measures can be a powerful mechanism to change practice and improve care quality [45]. Patient-reported outcome measures (PROMs). At the individual patient level, PROMs can drive improvements in diagnosis, communication and prioritisation of needs[46]. At the population level, PROMs can be used for research, benchmarking, and fed-back to providers to inform service improvements [47].

Given the pressures that acute care systems are under, there is a significant risk that in pursuit of metrics that are relevant from the operational perspective, the focus on patient benefit is neglected. A move to a patient outcome motivated acute care response could result in a paradigm shift in the care of older people with frailty, with benefits for patients, but also potentially carers and the system itself. PROMs should lead to better care by focussing on the issue of "what matters to the patient" rather than "what is the matter with the patient". However, such an evidence based patient reported outcome measure does not exist for the urgent care context, according to a recent International Consortium on Health Outcome Measures (ICHOM) review of the outcome measures.

New Horizons?

Having described the current state and some of the problems faced, what then does the future hold for older people with frailty and urgent care needs?

The future state…

Health (and social) care systems will routinely risk stratify their population based on frailty (needs), as well as specific conditions (diseases). There are already electronic Frailty Indices that have been developed, validated and implemented in primary care systems in England [48]. There is work underway to develop automated frailty identification tools that can be embedded into hospital systems to facilitate wide-scale

recognition of frailty in the urgent care context. These frailty indices will allow the system to measure and track the outcomes of older people with frailty and determine where in the pathway interventions might be best tested, and easily examine the impact upon service metrics. Automated tracking systems will alert care providers to the presence of frailty, which is turn will trigger a different model of care.

All urgent care staff will be able to deliver the basic competencies necessary to initiate CGA, supported by easily accessible e-learning platforms and/or clinical navigation toolkits. Geriatric teams will be embedded at key interfaces on the patient pathway, supporting urgent care staff in the more difficult scenarios, through role modelling and some direct clinical care. Standardised communication systems will allow the generation and case management of stratified problem lists which are multidimensional in nature, and focus upon patient centred goals of care.

Outcomes will be routinely collated at key points during or after an urgent care episode; these will be linked to system wide frailty measures to allow comparison between systems, and will link to funding mechanisms to reward the best performing systems and services, possibly individual clinical teams.

Consider the following case study as an example:

Gina has dementia and lives at home with a twice daily package of care, she usually walks with a stick. She has a past medical history of cataracts, osteoarthritis, hypertension, CCF and deafness. She has been brought to the ED in an ambulance because her evening carers found her on the floor in the hallway, she was alert but disorientated and had been incontinent of urine. Medications: Amlodipine, Donepezil, Bendroflumethiazide, Amitriptyline

On arrival to the ED, Gina arrives in the initial assessment area. The nursing staff obtain baseline observations- they use an age adjusted triage tool - this reduces the risk of under triage by allowing for the altered physiology in older people. During the initial assessment, they note that Gina is frail from the existing information, which prompts them to screen for geriatric syndromes. Screening takes less than two minutes to complete, Gina is identified as having likely delirium.

Since the ED is frail friendly, Gina’s trolley is adjustable to a low level, making it much easier for her to transfer on and off the trolley. Due to Gina’s deafness, the nurses use a portable amplifier (one of two which are kept in the department) to communicate - this makes it much easier for Gina to understand what is going on.

Due to her cataracts and her cognitive impairment, it is difficult for Gina to process environmental cues - fortunately, there is a large clock on the wall of the bay, and the staff are all wearing large print ID badges with simple titles which makes it a little easier.

The department colour scheme is a contrast of cream walls and maroon signage and floors, this is easier on the ageing retina than the commonly used pale blue - which does not offer such clear contrast, and can appear as a dirty grey

The ED registrar in the assessment area has recently been to a training day on trauma in older people, as part of the national GEM curriculum. He remembers that falls from standing height in frail patients are more likely to result in cervical spine injury and that his threshold for CT scanning her neck should be lower. He also remembers to check for pressure damage and rib fractures, since these are often overlooked.

Once Gina has had her CT scan arranged, she is moved through to the main area of the department - she is handed over to a locum doctor who is new to the department. He is asked to prescribe analgesia, and uses the department guidelines on 'Acute Pain management in frail older people'. Following the guideline, he assesses for signs of constipation before prescribing a laxative low dose alongside an opiate.

Gina's CT comes back showing that she has no fractures, but has severe degenerative changes in her cervical spine and moderate cerebral atrophy with periventricular white matter changes suggestive of small vessel disease.

Because Gina has been identified as frail and probably delirious, she is automatically referred to the frailty team based in the ED - there is a frailty nurse present on every shift, she obtains a collateral history from Gina's daughter and assesses the social background. Meanwhile an ED consultant who has done a fellowship in geriatric emergency medicine reviews her medications and discusses her case with the locum doctor - explaining the need to further investigate the fall and the urinary incontinence. He withholds her amitriptyline. He advises the SHO to begin an initial delirium screen - a locally agreed range of blood tests, sepsis screen and medication review, along with a bladder scan for the urinary incontinence.

The department has a policy that frail older patients should be seated rather supine on a trolley if it is safe to do so - Gina is uncomfortable in her trolley, so she is transferred onto a padded recliner chair. The floor is special non-slip material to reduce the risk of Gina falling when transferring. During the step around transfer onto the chair, the nurse assesses her ability to stand unsupported. She is unable to do this, and so is flagged up as requiring input from a physiotherapist.

Since Gina is not able to stand or walk unsupported, she is referred into the acute frailty unit within two hours of arrival in the ED. Her paperwork from the ED accompanies her, which contains space for the assessing doctor to form a stratified problem list and contains the baseline collateral that has been obtained by the frailty nurse.

Final Thoughts

The care of older people in urgent care settings is evolving in many different areas. Underpinning all the changes in the way care is delivered to frail older people is a need to consider the way geriatricians collaborate with other services and specialists when developing robust systems of care for older people. Geriatricians are not numerous enough to deliver direct care to every frail older person, and it is not possible to place a geriatrician in every GP practice, nursing home, emergency department or acute medical unit all the time. However, geriatricians are increasingly well placed to serve the needs of older people by engaging in increasingly well recognised collaborations with other specialties and developing a sound educational and leadership platform from which to help direct and oversee a gradual and sustained improvement in the way care is delivered to every older person in an urgent care setting.

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